

THE COMPLETE
HORSE DOCTOR;

CONTAINING THE
HABITS, DISEASES AND MANAGEMENT

OF

THE HORSE,

IN THE

STABLE AND ON THE ROAD;

WITH

ADVICE TO PURCHASERS.

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ADVERTISEMENT.



THE contents of the following pages are the results of long practical experience, and have been written with a view to the benefit of persons not thoroughly practised in the proper management of horses, and to whom the knowledge now imparted may be useful. To men of business in particular, whose time is too much occupied to admit of leisure for much study, beyond their every-day pursuits, the present work may afford information not so easily acquired in other forms. A few minutes devoted to the perusal of it will probably amply compensate them for their trouble, as the whole is comprised in a small compass. It will be found that the entire treatment of the horse, that is, the useful, or road horse, is fully considered in the subsequent pages. The publishers, also, are not ashamed to confess, that one part of their object has been to induce greater humanity than is usually practised in the treatment of so noble an animal; and it is melancholy to reflect, that the "high-mettled racer," in the words of the song, is not unlikely to become "food for the hounds." But those who are not susceptible of the finer feelings of our nature, may be influenced by considerations of self-interest; and it would not only evince humanity, but it would be a pecuniary gain, if the owners of horses paid more attention than they usually do to that kindness of treatment which is dictated by Nature herself.

THE HORSE.



INTRODUCTION.

IN all nations, and in all ages, the horse has been esteemed as one of the noblest and most valuable animals of the brute creation. It is unnecessary for the object of the present work to make any particular allusion to the pride and admiration in which he was held in ancient Greece and Rome, and indeed among every warlike people. Caligula, it is recorded, invested his horse with the dignity of a consul. Innumerable passages might be quoted from the poets descriptive and illustrative of the qualities of this beautiful quadruped; but we shall confine ourselves, in this introductory matter, to a citation from the Book of Job. The following verses are so applicable to our subject, and so sublime in conception and expression, that it would be almost an unpardonable omission not to lay them before the reader, who need not be told that the apostrophe is to the Deity.

“Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength: he goeth on to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he back from the sword. The quiver rattleth against him, the glittering spear and the shield. He swalloweth the ground with

fierceness and rage ; neither believeth he that it is the sound of the trumpet. He saith among the trumpets, Ha, ha ; and he smelleth the battle afar off, the thunder of the captains and the shouting."

Such is the description given in holy writ of this superb animal ; but it is now our task to treat of all that relates to the use of him, in a plain and familiar style, adapted to all capacities.

The value of horses mainly depends upon their soundness and capability for work. It is, therefore, of the utmost importance to keep them in the most healthy condition. Yet, this being universally allowed, it is a constant and general complaint that so few of these valuable animals are preserved in a proper state. But it is surprising that those who so complain do not perceive that the blame principally rests with themselves, as the remedy lies solely in their own hands, so far, at least, as any remedy can be applied. There can be no doubt that persons who employ horses wish to get all the work they can from them, without decreasing their value ; but that they do not effect this desirable object is evident from the prevalence of the complaints made upon the subject. The general employers of horses, more particularly men of business and commercial men, seem to think that a knowledge of the horse is implanted within them by nature ; and this overweening confidence leads them into an infinity of errors, and prevents them reading what better informed persons have said upon so important a topic. Nor do such persons take even common precautions in the treatment of these animals, by attending to experience or example ; but they trust the care and health of their horses to ostlers and others, who have but a secondary interest in preserving them in good condition. It is only fair, however, to admit that the little benefit derived by persons keeping or entrusted with horses from works already published

regarding their treatment, may be partly owing to the expensiveness, or voluminousness of such treatises, requiring either more money or time than it may be convenient to afford for that purpose. To which may be added, that hitherto there has not been a single work issued from the press of general and complete utility on this subject.

Here, then, the reader may perhaps ask, What am I to do? I take every possible care of my horse; he has abundant food; yet he is not what I could wish him. Another may say,—I do not think great feeding good for the health of a horse, from an idea that too much food causes broken wind, or from an apprehension of bringing on inflammatory disorders. To go through the reasons, pro and con, that people might urge in vindicating each his own particular mode of treatment of the noble animal subject to their charge, would be a mere waste of words. Ask them to explain why they do this or that, and although they may give you an answer perfectly complacent to themselves, they never succeed in making converts of others. Hence, it is apparent, that their judgment is not based upon any rational foundation. To correct erroneous opinions on this interesting question, to qualify horses to work with ease to themselves, and also to contribute to the pleasure of their owners, constitute the intent and object of this little tract.

That horses ought to remain sound, and would do so, to a much later period of life than is the fact at present, will, it is hoped, be demonstrated in the course of these pages. That every thing animate must decay by the progress of time, is an axiom too trite to be dwelt upon; but trees or men may decay prematurely for want of proper culture, and so may horses. Transplant a tree to an uncongenial soil or situation, and it will cease to thrive; or it may perish through some injury to the roots; or

from other causes operating against the laws of nature; whereas, under different circumstances, it might continue to prosper much longer. The writer of this remembers the grief of a friend at the decline of an ornamental and valuable timber tree, in consequence of his driving a large spike nail into the trunk, not thinking at the moment it would do the least injury. In another instance, a person, in order to improve his grounds, raised a bank of earth around some elm trees, which, to his astonishment and regret died. So it is with men and other animals: climate, soil, situation, and the nature of their employment, have the most important bearings upon their health, soundness, and capacity for usefulness.

Our present object, therefore, is to recommend the most judicious method of treating the horse, with the view of correcting false notions and of increasing the value of that beautiful animal. Analogy will show us that this project is not so impracticable as many persons might imagine. The gardener has brought many tender plants from the East to flourish, even in the rigour of a northern winter. The Ethiopian will live in Greenland; the Laplander in Africa; but they would probably not do so, without due attention to the change thus made in place and circumstance. It is science that is their instructor.

Morgan, in his Treatise on Horsemanship, published about two centuries back, tells his readers to "put one bottle of sherry into a pint of water, as the ordinary drink of a horse, with much bread. The blood being derived from horses originally brought from the East, the wine is necessary to keep up the heat of blood required in this country." This treatment would now be laughed at as injurious; and it is to be doubted whether the grooms of those days did not appropriate the greater portion of the wine to their own share, and no less to the advantage of their horses.

Finding, then, that not only man, but birds and flowers, as well as many things, intended perhaps less for use than ornament, are capable of undergoing mutations of various kinds, it would be folly to suppose that animals adapted and given to man for his necessities, are not capable of similar changes without detriment to their strength and constitution. It is true, that, like the plants before alluded to, those animals would degenerate without proper care; but the same all-seeing Providence that has so bountifully provided these "creatures to our uses," has also endowed us with reasoning faculties, so as to enable us to reap the full advantage from them. Although it is impossible to prevent the infirmities of age, it is at all events in our power to avoid or protect the beasts of the field, sent as they are for our good, from wanton or inconsiderate ill-treatment. Much of their present sufferings, without any maudlin sensibility, might be alleviated by the diffusion of more knowledge on the subject amongst persons who ought to feel interested in such matters. It is our duty to use, not abuse, the creatures made for our service, and for that purpose to avail ourselves of any means best calculated to prolong their existence. Such must be, in fact, the wish of every reflecting man, who keeps, in particular, a horse, or horses, not only from feelings of humanity, but also for the sake of profit; and we may feel assured that in all cases, the best and wisest policy is to treat a horse with kindness and gentleness. The tendency to act wrong in this respect, proceeds less from hardness of heart than from the absence of competent knowledge on the subject, as we have already hinted, the mass of information concerning it being spread over, or scattered through, so many extensive works, that few people have leisure for the perusal of them.

The best horsemen are to be found among noblemen and gentlemen. They feel proud of the accom-

plishment of being good riders, and they are early accustomed to the sports of the field. With "all appliances and means to boot," it would be strange if they did not possess the best horses, the best trainers, and the best grooms. But the mere traveller's horse is comparatively a sorry affair, the master having little spare time to see to the wants of his steed, but leaving him to the mercy of rapacious ostlers, or people utterly unfit to be entrusted with the management of horses. Yet the poor hack of the commercial traveller is, or ought to be, as precious to him as the most high-blooded racer to a patron of the turf. Men of business seem to think their horses mere machines; and they seldom study how to make the most of them. Brush off the dirt which offends the eye, or spoils the clothes, and give the animal a regular portion of food. Wheels must be greased, or the naves would burn, and the progress of the carriage stopped. So with horses; they must be fed, by the same rule as you grease carriage wheels, or they would in like manner be brought to a termination of their career. Why, then, so much apathy towards those four-footed servants who contribute largely to the pleasure of the rich, and are the means by which multitudes are in the habit of procuring their daily bread? What, for example, would the commercial traveller do without his horse. Why, the horse is part and parcel of his very existence. And who has so little time to look after him? Yet, with the same opportunities now at his command, he might, from the knowledge he may acquire by the perusal of these pages, turn his horse to much better account, save himself much expense in the course of the year, get the animal to do his work in a better manner, and with the pleasing reflection that he has also prevented the infliction of needless suffering. In fact, the reader will find, by paying a little attention to the remarks now ad-

dressed to him, that he would seldom have a bad horse, if it were not for gross mismanagement. Ignorance is the sole cause of the non-discovery of the good qualities of the animal, and the natural effect is to mar them.

In a religious point of view, it is also incumbent upon us to treat with kindness all those animals which are given to us for our use. The horse, in particular, should be an object of our especial regard. How many of the complaints under which he labours are the consequences of man's brutality! His diseases are few, even in an artificial state, and those few are brought on by ill-treatment, or, in milder language, mismanagement. Yet there may be quite as much cruelty in the one case as the other, if the latter be not of the two the worst.

Whose horses have to undergo such unremitting fatigue as those of commercial travellers? Yet, where is there besides so large a body of men who are enabled to pay so little regard to them, or to acquire a competent knowledge of the best mode of treating them? They know that horses have mouths to be fed, for this knowledge is forced upon them by the cost of their keep, and they know also that the mouth is useful as a place for the bit, without which they could not be ridden or driven, and this, generally speaking, is the full extent of the knowledge possessed by the class of persons alluded to of horses. To understand the quantities of solids or fluids they require for the preservation of health, is scarcely to be expected of them. Some persons have a fanciful theory in favour of giving them drugs, both in their meat and water; in most of which cases, if the animals could speak, they would say, "Throw physic to the dogs." Others think that soapy, or dirty, filthy water, is better than the clearest, as they will drink more sparingly of it; but horses are not likely, any

more than human beings, to grow healthy upon poison, or to fatten upon filth.

Before any one can obtain a mature acquaintance with the character of the horse, he must have had no ordinary experience of his habits. He must have been almost cradled in the manger; his life must have been passed in the stable. This would be little suitable to commercial life, the members of which are drilled from the school to the counter; there they serve an apprenticeship; then are probably shopmen; and eventually they are started upon the road. Well, they thenceforth travel from town to town, canvass for orders, arrive quite jaded at their resting place for the evening, and entrust their equally jaded companion to the ostler of the inn. In the course of time they probably pick up some dear-bought experience; but it is not in the nature of things that they should attain any very profound or correct ideas of the management of horses. Numerous tradesmen, and persons who have been brought up to professions, may also understand the force and applicability of these observations, although they may be slow to confess that the cap fits themselves.

IMPOSITIONS TO WHICH A TRAVELLER IS SUBJECTED.

Manifold are the impositions practised upon the unwary in travelling, and of which none but the more experienced can form the least conception. What can be a greater misfortune than to find that your horse has met with some accident at a distance from home, and you are obliged to leave him to the conscience of an ostler? You have to pay not only the amount of his keep, but the ostler has a friend in the farrier, whose kind offices are also put in requisition, and whose bill must likewise be paid; and a variety of other contingencies increase the sum total. A short time since a commercial travel-

ler, connected with a London house, had his horse cast* in the stable, and in struggling to regain his legs, kicked them through the side of the stall, taking a small piece of the skin off the front of the joint. The leg swelled, and the part injured being a joint, of course became stiff. Ostlers in their way are cunning fellows, and by always concluding, as well they may, that very few of their customers are deeply versed in veterinary science, soon detect how far their knowledge goes, and in this particular instance, the man of the stables found as complete a greenhorn as he could desire. To increase, therefore, the swelling and stiffness, the ostler applied some of his *efficacious oils* to the wounded part, (the fraternity are never deficient in nostrums for occasion) for the express purpose of retarding the cure. The result was that the clever ostler contrived, by various expedients, to keep the horse under his own care for three months, but offering to purchase him at a fair price, thereby meaning quite the reverse.

Never take the word of an ostler where the health of your horse is concerned, or that of the ostler's farrier, or veterinary surgeon: for, without attempting to disparage respectable men in either of those departments, it is notorious that there are many unworthy members of both, who do not scruple to participate in the dishonest gains of the rascally ostler. In case of necessity, always apply to some creditable person in the neighbourhood to recommend you to a professional man of character; but as prevention is better than cure, it is our intention in the sequel to point out the best means of avoiding the accidents and maladies to which horses in common use are liable.

* Thrown on his back, and unable to get up.

CHOOSING A HORSE.

IN choosing a horse, consider well for what work you intend him. If you want him for two or more purposes, judge of his qualities with reference to the most important of those objects; that is, if you want a real working horse, to draw heavy carriages, four-wheeled chaises, cabriolets, or those lighter vehicles, one horse chariots, keep only one for that business. Under this description, indeed, may be included the horses of tradesmen and travellers generally; but not those of gentlemen who keep a respectable stud.

To commercial men, who now seldom ride on horseback, but who make their journeys in gigs, a good harness-horse is the desideratum. This is more especially the case in the iron, or Manchester, and indeed in many other trades, where the traveller has to convey weighty samples or patterns. Nor may it be amiss to observe in this place that the heavy loads which the horses of some commercial travellers have to drag after them reflect little credit upon the humanity of the owners—almost a regular cart load! But for the exact kind of horse best fitted for such uses, it would be extremely difficult to lay down any fixed rule. All we can do is to give some general instructions, by means of which, with a little attention, the judgment of persons may be materially assisted in the selection of animals for use, as well as in keeping them ready for their work.

SIZE OF HORSE.

HORSES for the road should never be under fourteen hands high, rarely less than fourteen and a half, and never above sixteen. As a general rule, fifteen hands and a half should be the extent. If your

horse be required to draw a light chaise, without much incumbrance, he may be small, and the better for being three parts blood. Where there is more weight to contend against, you must choose a heavier horse. Bear in mind that, as a rule, there must always be weight to contend with weight. A heavy animal, by merely throwing his bulk against the collar, materially assists in moving his load, while the lighter one, if over-weighted, has all to do by muscular power, which soon becomes exhausted; for, in the latter case, the horse is continually straining to effect by violence, that which in the former is accomplished by weight only. Otherwise, give each horse his burthen in proportion to his weight, and the blood-horse would kill the other in a very short time. For the heavier loads, therefore, speed and breed must be abandoned for weight; and the horse must have the round arched neck, large rotund barrel (or body) and rounded hind quarters.

AGE.

UNDER this head much prejudice exists, and many false notions prevail. One person supposes that if he buys a horse when he is young, it must last him so much the longer than if he had bought him at a more advanced age. Others, again, imagine that having purchased a young horse, they are not likely to be serious losers by him, if they sell him again while the mark remains in his mouth. This may be all very well with those who have more horses than they can possibly exercise, and which are, therefore, unused to a day's work. But such is not the fate of the horses we are now alluding to, those which are doomed to hard daily toil on the highways, resting only on the Sunday from their heavy drudgery. With what joy we may suppose the poor animals welcome the return of that day, unless it be their

piteous lot to belong to some unfeeling or thoughtless employer, in which case that day of repose to others is to them converted into the most laborious of all the week.

Persons in business full well know that they do not pay men's wages to persons in their employment until they have arrived at the age of twenty-one; not from any unjust motive, but because they have not attained the strength of manhood to enable them to perform men's work. It is their competency to go through so much labour that entitles them to full wages. Now, the horse must be from seven to eight years old to put him on a par with a man of twenty-one. Yet people are so misjudging, or rather they are so ignorant of this fact, that they imagine the horse is better calculated for hard work, or long journeys, before than after the age mentioned. If experience could teach them, they might readily perceive the younger the horse is, the sooner he will be strained and worn out, by being overtasked. Where the work is light (carrying no heavy loads,) and the stay frequent, at places no great distances apart, and provided you drive moderately, a six year old horse may suit your purpose; that is, if you are particularly anxious to have a mark in his mouth; if not, one of seven or eight would be preferable. In cases where the loads are carried light, and you do not often rest any length of time on your route, or if your vehicle is heavy, and you do not drive at a very moderate pace, never choose a horse under eight years old, and then he will last you longer and serve you better than any young one. Stage-coach proprietors, and all great dealers in horses, do not consider them aged until after their sixteenth year; and provided they have not been subject to ill-usage, they will be found sound and in good condition long after that period.

Old Elwes, the celebrated miser, would not permit his colts to be broken in until they were six years

old : the consequence was that when his horses were upwards of twenty years of age, upon their backs he was able to beat any other cattle in the field in hunting. All that is required for work are young legs, and what are termed old mouths. This description of horse is absolutely necessary for the heavy wagon and for four-wheeled carriages.

It must nevertheless be admitted, that horses may also be too old : but so long as they are sound upon their legs and keep up their condition, they are always better suited for hard work than young ones. At the present moment there is living a gray mare, the property of a surgeon in the neighbourhood of Finsbury-square, upwards of forty years old, yet which still does her work in admirable style ! It is an attested fact, that, at thirty-six years of age, this surprising animal performed a distance of eighty miles a day, two successive days, and one hundred miles in one day ; and that too without exhibiting any remarkable symptoms of fatigue !! This, it will be said, is a rare instance of the powers of the horse, and so it is ; but it is so chiefly from the disposition of most owners of horses to overwork them when young, and so wear them out before they are old. The mare in question is still perfectly straight on her legs, and free from all complaint, except a slight asthmatical cough, observable only on foggy days, and then only on coming out or going into the stable. It occasions no real inconvenience, and is merely a sign of the natural effects of time on her constitution.

It may be here worthy of remark, that many persons are using very old horses, imagining them to be much younger than they really are. For instance, a gentleman keeps a horse until he supposes him to be sixteen, or thereabouts. He then thinks of disposing of him as being worn, and getting a younger. The animal is accordingly transferred to a dealer, who sees him well upon his legs and fresh for his age.

He then *bishops** him, so as to make him appear of the age for which the dealer wishes him to pass. Should he chance to find a considerate owner, he passes on again, until he is a second time regarded as too old for further service. Again sold to a dealer, ground young again, resold, and a new purchaser pleased with the idea of his young horse. Cases of repeated bishoping are now less common than formerly; but that they have occurred, there can be no doubt; and the old gray mare alluded to would probably have undergone this operation more than once, if she had ever been so unlucky as to have fallen into a dealer's hands. The Dowager Lady Lonsdale had two old hunters as carriage horses, the one thirty-nine, the other forty-one or forty-two years of age. Some time since, two horses were working as carriage horses, at Dulwich, even older. The late Mr. Astley was presented by the Duke of Leeds with a Barbary horse, that became very celebrated, performed as a waiter, and lived to the great age of forty-three. It was not long since recorded in *Bell's Life in London*, that a horse had died upwards of fifty years of age. Many other instances of the longevity of this noble animal might be adduced; but enough have been quoted to prove, that if the horse be not old from abuse, he will not be so from years, at eight.

PACE.

"It is the pace that kills," observed Lord Forester, and all who are obliged to keep horses for their livelihood would do well to bear this maxim in mind; and also to remember, that the pace which is slow for one horse is fast for another, and *vice versa*. To hear some of the knowing gentlemen assembled round a comfortable fire in the travellers' room of a country inn, vaunting of the feats of their horses, can only excite,

* Marking the teeth with a hot iron.

among real judges, pity or contempt. Even supposing the tales they recount were true, which in most cases they are not, these dealers in the marvellous only expose their own ignorance and folly. To such persons, therefore, it may be as well to mention, that one thousand guineas have for some time been offered, and are still unclaimed, for any horse that has performed, at moderate paces, twenty miles a day throughout the year. After this, it is to be hoped, that these empty boasters will cease to relate stories often, of a verity, out-heroding Herod.

Should a person have a horse capable of performing sixteen miles within the hour, still from eight to nine would be quite enough to work him as a general pace. If, however, you wish to keep up his full pace you may put him to his speed for a few yards occasionally; but vain would be the hope, with daily hard wear and tear, to keep him to that pace for a constancy. A coach-horse, running at the rate of twelve miles within the hour, and only doing one short stage on his days of work, will not, at the end of two years, be able to do nine miles within the hour, and he is allowed to work only four days a week. Make your paces moderate, according to the utmost speed of your horse, and agreeing with the weight of samples, or other luggage, you require him to draw, and with regard to the distance you may have to travel daily. But when you buy an aged horse, the best plan is to leave to himself the choice of his pace; and he will then adopt the one he can endure the longest. Put him out of his own course, and you soon tire him.

There is yet another reason, and an important one, for selecting old horses; they know their business, and will do it properly if left to themselves; while two young horses (a master not used to horses, and a horse not used to work) coming in contact on the road, are very likely to be productive of an accident

from each being equally ignorant of the meaning and intentions of the other. Who would set the blind to lead the blind? Many serious accidents are to be attributed to the cause now assigned. Some men are very fond of racing on the road, priding themselves on their horse's metal. This is, to say the least of it, a very absurd and dangerous practice, and one that no gentleman would follow. Admitting that your horse may have the superiority over another, still you may labour under disadvantages, of which you are perhaps not aware. First, have you equal weights? Next, are your horses of one size? Then, do your chaises run equally well? Are your wheels of the same size? Have both horses been performing a similar number of miles, at the same pace, for any given period? Are they of the same age? Are they equally well bred? And have they been fed exactly alike? Here are nine questions, and on the answers to every one of which much would inevitably depend in a match; and even these might be multiplied and dwelt upon more at large. But if it were upon these grounds only, trotting horses against each other indiscriminately would be great folly. And what is gained by this silly practice, but suffering to the poor animals—aching muscles and feverish feet? Even if you succeed in the match, you may never have the satisfaction of exulting over your antagonist; you may never know what opinion he has formed of your own horse: you may never see him again; or, if you possibly do, he may plead any of the foregoing reasons for being beaten himself. You have, therefore, all your exertions for nothing but the gratification of a paltry ambition, while your poor beast is distressed by your folly. That this is the natural consequence must be obvious to any one. But if proof were necessary, here it is: you push the animal wantonly for some distance at the top of his

speed, and the absurdity of so doing is proved by the evidence afforded in the course of regular racing. The racer takes time in training: he then runs a course (if very severe) of two miles, or thereabouts, only, at speed; and after this he requires the greatest care. The trotter also takes some time in training; he then performs his task of (say) sixteen miles within the hour; after which he has the utmost care taken of him for the next six weeks, before he is again fit for work. Now, the top of any horse's pace must be his utmost speed, whether it be six or sixteen miles per hour; and if your horse can do only the six, and you keep him on at that rate the one hour through, at the end of that time he will have performed a task as great, and nearly as distressing to himself, as another horse that has accomplished the sixteen miles in the same period. It may perhaps be said that six miles an hour is an exceedingly slow pace for the speed of a horse's trot; but the object of this argument is to show the absurdity of supposing that horses can go beyond a certain or natural pace, for any distance, without being distressed, and consequently injured. All beyond this is artificial, as any rate of speed must be that requires particular attention or training to accomplish it. The horse that does the sixteen miles after so much care and preparation, might have done nine or ten without any such means having been used, and with ease to himself. The latter, then, would be his natural pace, and he should not have been forced beyond it.

Horses that can be pushed to ten miles as their utmost pace, *without training*, would do from seven to eight as their natural pace. They ought not then to be urged beyond this as their customary rate, at which they will continue to make ordinary journeys, day after day, for a long time, without losing their condition, or with much injury to their constitution, though requiring that attention to be hereafter

recommended. One fact deserves to be recorded. A gentleman possessed a horse, which he discovered could perform one mile in three and a half minutes, and considered him a treasure. The owner doubted not that the horse could be soon trained to do sixteen miles in the hour, (his ordinary pace was eight,) but he never succeeded in doing more than twelve.

In what has been said, there has been no intention to condemn racing, under proper circumstances and regulations; but there is a season for all things; and men in business, or commercial travellers, can scarcely be supposed to be able to spare their horses to go into training for racers. Neither is the road the fittest place for that kind of sport, even if such persons were more expert jockeys than they generally are; and by attempting it they only make themselves ridiculous.

The observations just made on the artificial and natural paces of horses, are intended as a guide to those who use them under seven and eight years old. After that age, they generally acquire an uniform pace, which is their natural one, at which they will continue a long period, and perform their work comfortably. Put them out of this pace, and they soon begin to show fatigue, in comparison with their strength and vigour when left to themselves. Yet even under mismanagement, they will beat younger horses, if the latter have been equally subject to ill treatment.

Should you meet with a horse of the age required for your purpose, with his legs and feet in good order, but his paces uncertain, it is a proof that he has not been in respectable hands, and that his owner was no judge of horses. You have, therefore, to train him into his regular paces, and in so doing be careful to observe the foregoing rules. Old horses with this irregularity of pace must be examined with more than ordinary caution, as there is the greater chance of being unsound.

FEET.

THE feet of the horse are of the utmost consequence, as on the state of these his value in a great measure depends. He should not only have a good foot for the present, but one likely to stand all the beating, battering, pricking, and bruising, to which it is exposed on our hard and newly repaired roads, at almost every step. Here is another cause of wonder, that we have not more lame horses than we have, particularly as most lamenesses are produced by concussion. Nature, however, has wisely ordained a provision to guard the animal creation from numerous injuries to which it would otherwise be liable; and so she has in the present instance. The horse bred in high and dry situations, in which the soil is of a hard, stony, or rocky description, is framed with a strong, obdurate hoof, very subject to contraction. This, then, is the foot best adapted for the purposes of the road. But nature intended that these animals should go over the ground in their own way, and that when they found one pace hurt their feet, they should be at liberty to change it for another; or that if their feet became bruised, or over-heated, they should find no impediment in quitting the rugged and sharp path for the cool and velvet grass. But man has arbitrarily, though necessarily, reversed the benevolent design of nature. It is, perhaps, superfluous to inquire how road horses are now generally treated; but in an essay expressly written on the subject, nothing growing out of it of interest should be omitted. In the first place, they are shod with iron shoes, which are not only conductors, but also retainers, of heat. Next, instead of allowing them to choose their own paces on each particular piece of road, those paces are chosen for them; and not only so, but likewise the road itself,

which, perhaps, neither man nor horse would have voluntarily selected with reference to the animal's feet.

If, however, there be a remedy for this, or other evils, relating to the horse, it behooves us to adopt it, in gratitude for the many services rendered to us by that useful animal. We ought to save him, not only all the pain we can, but as much as possible of inconvenience. This we have the means of doing to a considerable extent in the particular case before us, and the mode of relief is pointed out by the horse itself, when in a state of nature. Having in that state travelled over hot dry ground some distance, he will stand with his feet for a short period in the first water he can find; he will then remove to some plot of cool grass, on which he will abide until all heat (inflammation) in his feet has evaporated. Now, what is the general treatment on a burning day, when the animal has arrived at the stable door, to which his feet are subjected? It is this. They are often just damped over, sometimes merely wiped, in order to take off the dirt, with a wet sponge, and he is then led to his stall, to remain there, until he is again wanted, on hot, dry litter. Once or twice a week his feet are stuffed with cow-dung or clay; the litter is commonly very bad, as it gets dry between evening and morning, and it then hurts the feet; particularly if any of it, however small the quantity, be allowed to remain between the shoe and the sole of the foot, inasmuch as it will prevent firm descent of the sole, and is sure to cause lameness. Cow-dung repeated too often causes thrushes; but we may use *ad libitum* that which the horse himself has pointed out, namely, WATER, which can never do any harm. The best way of using it is as follows:—Get a piece of serge about eight inches deep and twelve long, for each fore-foot; soak the serge well in water, and then apply it, while spread

and open, the long way, round the pastern; next pass a piece of list loosely round the middle of the serge twice, then tie it and roll the top of the sergo over the list. This being done to both the fore feet, then soak each foot, bandage and all, in a pail of water, wetting them the last thing at night and the first in the morning; as well as at other times, when the bandages may be getting too dry, or on occasions when the horse may remain longer in the stable than usual, or has a day's rest. This practice will never be found injurious; and should there be at any time more than ordinary inflammation in the feet, and if it be not convenient to give the animal a day's rest, it would be advisable to drive him with the bandages on, and be sure to keep them wet. You may also stop his feet twice or thrice a week at night with cow-dung: but always see that it is taken out quite clean in the morning.

The flat-footed horse is bad for the road. Should you, however, possess one, the treatment of his feet should be the reverse of that just described. They should be kept as dry as possible, in order to which, see that they are dressed all over, sole, sides and all, about twice a week, or oftener if necessary, with a mixture composed of one half pitch, the other half tar, melted over a fire, and applied rather warm. This composition greatly promotes the growth of horn, and as flat feet are too thin and shelly, the object is to strengthen the soles. It is also better to protect these thin feet by a leather sole.

TEMPER.

Avoid a dull horse for the road. There cannot be a greater annoyance than to find a horse rather inclined to stop than to proceed; and to be always applying the whip to the sluggish animal is not only absolute drudgery, but it makes him daily more stub-

born and indifferent to the lash. To trot horses of this description is almost as bad: fractious and fidgetty, there is no trusting them, and they are often dangerous. Vicious horses should also be particularly avoided for the road; a kicker may damage your vehicle, and detain you some time to get it repaired; to say nothing of your own personal risk. As a precautionary measure, it is prudent always to use a kicking strap, even with horses that have hitherto shown no disposition to kick. Nor can persons who are obliged to go occasionally into strange stables, where there is a number of horses, be too cautious in guarding themselves from the effect of vice in some of these animals. It is necessary for travellers, in particular, to go into the stable to look to the condition of their own horses, and without due care it is possible they may receive at one time or other, an ugly kick or bite, from some horse with which they are unacquainted. Moreover, ostlers will not pay the same attention to these disagreeable brutes as to others, thereby rendering your personal attention the more requisite, and consequently your chance of injury the greater. The dislike and neglect of ostlers to these animals are also attended with other ill effects, for without proper care their real capacity for usefulness becomes crippled; and besides, they often incur the hazard of being lamed in the stall by blows from the pitchfork. After these observations, not many persons, it is presumed, who may peruse them, will, for the sake of the difference of a few pounds in making a purchase, choose to encumber themselves knowingly with more vices than their own. It remains, then, only to recommend any unfortunate purchaser of a horse of this kind to part with him at any sacrifice, as soon as he has discovered his mistake; for whatever may be the loss, the saving would be no compensation for a broken limb. It may be as well to observe here, that

travellers usually putting up at the same inns, should insist upon the landlords or the ostlers placing all vicious animals apart from other horses, or at least in situations to prevent them doing injury to any but themselves, and especially to strangers who may have occasion to go into the stables. Ostlers frequently place these untractable brutes either next the door, or but one remove from it; so that persons having horses in the same stable have to run the gauntlet of the former, while seeing proper attention paid to their own.

ON CARRIAGE.

For use, never buy a high-stepper. It is erroneous to imagine that safety depends on this; so much so that all tumble-downs and stumbling brutes usually step high; while the daisy-cutter, or horse that would kick a sixpence before him, rarely falls. Both are evils as extremes, and, therefore, as in other cases, the medium is the best rule. The horse that unnecessarily lifts his feet too high batters them in treading, producing inflammation, besides fatiguing and wearing himself out by overstraining his muscles. The daisy-cutter is liable to a degree of inflammation about the feet, causing him to go lower than he would naturally, in order to lessen the concussion of his feet with the ground and prevent the pain of lifting his legs. With sound horses, a practised judge would in time make them step as high as he pleased; but all this lofty action is at the best but artificial, and only tends to tire and jade the animal. Lord Ongley's celebrated horse, Coventry, was sold on account of this high action, for three hundred guineas. But what would he have been worth to a commercial man, when it is well known, that if driven from the west end of London to Hampton Court, he was so exhausted, that he required some days' rest before

he could be even led back to town? The parade horse again can merely continue his artificial or high action for about ten minutes at a time, and this repeated three or four times, is a hard day's work. These remarks will also serve to show, as in our observations on the pace of the horse, that only a certain degree of exertion can be used with impunity; or the capability of repeating such muscular efforts at short intervals would be impossible, without serious injury. Nor can what has been already said, in a preceding page, be too often or too earnestly impressed on all persons entrusted with the care of horses, who appreciate their usefulness, or who would preserve their value. Leave the action of the horse to himself, or, in other words, to nature. Lord Pembroke, in his admirable work on Horsemanship, says, "When you are going a journey, care not how the horse carries himself, so that he does but carry you;" and this he addresses to horsemen, adding; "When they have time to play with their horses, is the time to attend to the animal's carriage." How much more necessary, therefore, is it that men of business should bear this advice in mind; for it cannot be expected that they should have the same knowledge of horses as men who have been almost cradled in the stable, have made the subject their constant study, and have had abundant opportunities to acquire experience.

FOOD.

It will be found more economical in the way of food to use old horses, in preference to young ones. The horse is not properly set and framed until he is eight years of age. He, therefore, before that age, requires support, not only for his daily wear and tear, but also for his growth. Neither do all horses require, as is too generally supposed, feeding alike,

One description, or make of horse, would almost fatten where another would starve. A small horse does not require so much food as a larger one, though it is often a subject of surprise that one horse is not so fat as another, when both have the same allowance of corn. Much also depends upon management in this respect, as when beans should be commenced and when left off. To lay down rules, however, upon a subject of this nature, from which there should be no deviation, is utterly impossible; but as general ones, an observance of the following will be found of great advantage. Disregard the time of year, whenever you go a few miles further on your day's journey than usual, as in that case a few beans would be very acceptable and of great service to your horse. These are to be added to his full allowance of corn, and not a single grain be allowed to be subtracted therefrom to make way for the beans. Should he have been exposed to more cold than usual from standing about in a bleak, sharp wind, or been out in the wet, he will be grateful for some beans, although this should happen in the midst of summer. Beans should never be omitted while changing his coat during spring and autumn, or should he have to stand in a colder stable than usual during the night. Indeed, all through the winter, as may be gathered from the above, beans are useful; but in the winter, when a horse has been exposed to extra cold wind or rain, the usual allowance should be doubled.

OATS.

A WORKING horse should never have less than four quarterns, or one peck of oats, a day, but more according to size and circumstances. Some horses, if in poor condition, will eat a peck and half of oats and half a peck of beans per day, with benefit to them. In feeding them well, (giving them plenty of

corn,) there is this advantage, they eat the less hay, consequently, they have soon finished their supper and get to rest; while the next morning they are in better courage and all the fitter for their work. Never be induced to stint a horse of his corn on account of any violence or fretfulness of his temper; give him his full quantity, and it will be found to act upon him as a sedative; and as he gains fat, he will become proportionably quiet and self-satisfied. But on the dull horse food has a contrary effect, and stablemen say, when they see an animal of this sort, sleek, fat and lively, that the corn pricks him. Let it not be imagined, however, that these effects are produced by one or two days' feeding. Such desirable changes can be wrought only by a continuance of good management for some time. Neither let it be supposed that a poor horse will not get fat. Feed him well, indulge him by walking up hill, and always pulling up to a walk when he begins to get warm on the neck, and in six weeks he will not appear like the same animal. The same remark applies also to the fretful horse, with this difference, that it is necessary to exercise more patience to get him to walk at first, and to abstain from applying to him the whip on any occasion, until he feels himself comfortable, which also may be in about six weeks. To tell a practised horseman not to use the whip to a fretful horse would be a needless caution, but to others, particularly beginners, it is not so; as there are many who would almost as soon be without a horse at all, as be restricted to using the whip only as often as necessary. The notions of such persons consist in the pleasure of using the flogger, flanking and cracking away, in grand style; not that they would be pleased with an animal constantly requiring the lash; but they wish to show off, perhaps to astonish a customer, or to excite a gape from a few idlers at an inn door, little reflecting that they generally leave behind them

an impression the reverse of that intended to be produced.

MASHES.

THESE are admirable for horses at all periods of the year, but then they should not be given in the parsimonious way they usually are, doing neither good nor harm. For what purpose are they intended? Why, just to open the bowels and gently cool the body; so as to preclude the necessity of having recourse to more violent medicines, the application of which would deprive the owner of the horse for some days of its services. Such would be the substance of the answer given to the above question. There are, however, other and perhaps better reasons to be assigned in favour of the application of mashes—they are important as preventing inflammation in the feet. Nature intended the horse to feed on succulent food, and stand or move on the cool ground. It may be observed that when left to himself he retires during the heat of the day into the shade; preferring the time to feed when the ground is cold and wet with dew, and he takes his exercise at his pleasure. But for the use of man, he is taken from the open fields into the close stable, his feet are placed upon a warm litter, and he is fed upon hot inflammatory food. This is reversing the design of nature, but is necessary to enable the horse to perform the work to which he is destined. Yet if we reflect that he is taken out of the stable, and forced to go at a considerable pace, not for any length of time agreeable to himself, but so long as it may suit our pleasure or business, is it not astonishing that so much violence done to nature is not resented more fearfully than it is? But the present artificial modes of treating the horse are not altogether unproductive of such consequences as might be anticipated. Fevers, though perhaps

slight, will ensue, and settle in the most vulnerable or most exercised parts of the animal's frame—principally in the fore feet. The best means of preventing or counteracting this ill effect, is by giving the horse (if on a journey) every Saturday night, half a bucket at least of bran mixed with *cold water*: nor, because a change is made for the bran, let that be any excuse for abridging his proper allowance of corn. The better plan is to mix the bran and corn together, making of the whole a thick wash, and not as usual damp the bran only. Attention to this recommendation will improve the horse, without injuring his appetite, as *warm mash*es are apt to do.

GRUEL AND CODLING.

THIS is a mess rarely required by the roadster, although some who would wish to appear more knowing than their fellows, give it to their horses without the least occasion. They have probably heard that it is sometimes given to hunters after a very hard run, and to trotters while performing a match, and they conclude that what may be good for one time must be good at another, by the same rule, that what is sauce for the goose is sauce for the gander. But it is not so in the present case. After a hard day's run, it is frequently necessary to bleed the hunter the moment the run is over, to prevent his death. But who would think of bleeding a roadster after a moderate day's journey, because hunters are occasionally obliged to undergo that operation after excessive toil? The reason for giving hunters gruel after very hard runs is the great prostration of their strength at the time. Their extreme exhaustion renders it necessary to supply them with nutriment in a condensed form to enable them to swallow it, and being thirsty from the fever about them, this is the most convenient mode of adminis-

tering a restorative. The hunter in this case is exactly in the situation of a horse just getting convalescent after severe sickness, but too weak to eat his customary food until he has been strengthened by tonics. Is it not, then, absurd to treat a horse in perfect health, nor exhausted by extreme fatigue, in a similar manner,—that is, to *coddle* him, for so such treatment under such circumstances is properly called? He will eat well enough if he has plenty of water to drink. But if he should be very warm, and loath to eat, give him a reasonable quantity, say six quarts, of *chilled water*, and then try whether he will eat some corn well *wetted*.

Persons who resort to this messing or *coddling* have, of course, a pretext for it, which pretext usually is that they have driven too hard. When this is really the fact, the better way is to give the horse an extra allowance of corn: he will eat it. It is the extreme pace which does the mischief with the hunter; but when commercial men distress their horses from the same cause, they ought never to be trusted with another. If horses are properly used, and yet are off their feed, it is not for want of gruel, and the sooner a veterinary surgeon is called in the better. The trotter has gruel given to him during his performance, because there is no time to feed him otherwise, or to prevent him being overcome by excessive fatigue. Both the hunter and trotter are given gruel on the same principle as a man in over-taxing his physical powers for a wager would need brandy as a stimulus. The reader may rest assured, and we repeat it, that the roadster is rarely in want of gruel.

The mare previously mentioned as having performed eighty miles for two successive days and one hundred miles in one day, when between thirty and forty years old, never had gruel. Many similar instances might be mentioned, but in these cases

the horses were under the management of persons skilled in the nature and training of this valuable animal, and being baited at proper intervals, were not over-done, while their appetites remained good. It may be taken as a general fact, that where gruel is required on the road, the horse has been cruelly abused through ignorance or carelessness, or pure wilfulness; and that the man who gives such messes unrequired is quite a novice in the treatment of horses; as it destroys the natural tone of their stomachs (by weakening the digestive powers,) causes them to lose their appetites on the least exertion, and making them incumbrances to themselves as well as burthens to their masters.

Boiled oats given to horses is only another mode of gruelling, and, therefore, comes under the same strictures. Those who require more evidence on this subject, may ask themselves whether exercise does not assist digestion, and whether men who labour hardest do not need that food which is hardest of digestion for their sustenance. It is upon this principle that prudent masters of horses give them beans upon extra work and extraordinary occasions. No one can deny that gruel and boiled oats are both easier of digestion than raw corn, and, therefore, are only suitable for weakened and disordered stomachs. Then why give messes when the appetite is good, and capable of digesting the best food? The race-horse never has gruel but in case of sickness. To bring him in proper condition to the post, the most solid food is necessary. Beans, and with these and oats he is liberally supplied.

WATER.

More error prevails respecting the quantity of water, and the proper times of giving it to horses, than perhaps on any other part of our subject.

Nature never errs, yet are ostlers determined to act in direct hostility to her dictates. One quantity of water, and one only, is almost invariably doled out, without the least reference to the actual state or wants of the animal. No matter what he may really require, what exercise he may have undergone, or how far the animal fluids may have been expended, they have but one rule under all circumstances. By a sort of reasoning peculiar to themselves, they have been brought to believe that the faster a horse has been driven, and the greater the distance, so, in proportion, he ought to be stinted of this indispensable element—water. Nor does the length of time which the horse may have been deprived of liquid sustenance at all enter into the stableman's calculations. If the animal may chance to have gone without his usual supply at the regular hour, the ostler will never allow him to make up for his involuntary abstinence. It might be thought that gentlemen not themselves averse to some refreshing beverage, would bestow more thought in this respect upon their four-footed companions; but whether they are conscious, from experience, that over-drinking is injurious to the health and constitution, or from a rooted aversion to pure water passing down their own throats, and so apply the same reasoning to their poor beast, is a question hardly worth the inquiry. One thing, however, they should not forget, viz. that quadrupeds have not the same incitements, or inclination, to go to excess, as bipeds have. The former only drink as nature requires, the latter yield to the temptation, both from desire and habit, on every frivolous pretence, until the result is, in numberless instances, the most disgusting debauchery. The horse requires water for the following purposes: to quench his thirst; to assist digestion; to dilute the blood and fluids, and to promote the natural secretions. By depriving him, therefore,

of a sufficient quantity of this vital article, we are impeding the necessary operations of nature; and this is the secret cause of much of the unsoundness in horses. For, as we have already said in a former part, nature will not permit her laws to be seriously violated, without exhibiting some resentment. A slow fever is one consequence of this painful deprivation, and which settles in the feet or eyes, but most commonly the feet, for reasons before assigned. May not glanders also be traced to the same cause? For slow fever not being allowed to subside for want of water, leads to inflammation of the mucous lining of the nose. At all events, no more satisfactory reason has yet been given for the origin of this disease. But without these after consequences, is it not singular that men should persist in inflicting so barbarous a punishment upon animals incapable of expressing their wants? To be ever thirsty, yet never permitted to quench that thirst, is the height of cruelty. Nabobs of the East have asserted that one of the greatest luxuries in that climate consists in being ever drinking, ever dry. Let them turn ostlers. In this country, stablemen seem to enjoy that luxury in a superlative degree. To quit, however, this little digression, how comparatively happy is the poor horse, not employed upon the road, but in some other, perhaps severer daily toil, yet, when let loose, may unrestrained slake his thirst by a refreshing draught at the first pond or trough he may reach.

Horses feeding upon grass, and without performing any work, always slake their thirst at a pond three times a day; and on each occasion drink not less than one pail each. This, too, be it remembered, is when they are living upon succulent food. By a parity of reasoning, it must be obvious, that they would require more water upon dry food. Why then give them *less*? Stablemen water their horses **three times** a day, morning, noon and night, or according

to their whim or laziness. A pail is allowed for each, but these buckets vary in size, containing from four to eight quarts; yet a pail is a pail, whether it be larger or smaller; to that quantity is the animal restricted each time. These men may well be called hydrophobiacs.

To move unusually fast, with a great quantity of water in the horse's stomach, is bad. But give him as much as he will drink, yet he will not be overcharged with the fluid. The plan adopted in racing stables is to give the horses water so frequently, that they will drink no more than six quarts at a time; but what would be still better, where practicable, would be to keep a pail of water standing by the horse, so that he might drink whenever he chose. A horse not put to the extent of his speed, can never be inconvenienced by being allowed the same quantity of water as the racer. Neither need any apprehension be entertained of impairing the condition of a roadster for work, when it is remembered that the racer is required to be in harder and firmer, therefore better, condition, than any to which it is possible to bring the former. When a horse is very warm, and has to stand in that state, if the water be pump or well water, it would be better chilled, but not warmed. Although, however, chilled water may be recommended occasionally, it should only be given when positively necessary. Warm water should never be given but to sick horses. Should a horse have drank water not agreeing with him, which will be soon seen, by his shivering and setting up his coat, and sometimes by being a little griped, the ostler should be made to put a piece of ginger under the tail. This is called figging, and will remove the evil almost immediately.

It may not be here misplaced, if we venture an allusion to a work published some time since on the present subject. The author of that work has made

some severe remarks upon this operation, and although most of his rubbish will soon die and be forgotten, yet as he wrote at a period when few others had published anything on the subject, his presumption was mistaken for knowledge; and as some of the readers of this work may have seen his strictures upon "Fundamental Firing," as he calls figging, a few observations may be requisite to remove a prejudice occasioned by so erroneous a phrase. The pain of this operation is soon over, and it is a query whether it is as bad at any time as that of the gripes, or cholic, or a cold. People would always prefer a smaller to a greater evil. Figging, then, in order to prevent or remove one of these complaints, is anything but the barbarity the writer alluded to describes it to be; and as it may obviate both, the objections to it are still fewer. Moreover, there is no danger in the operation; in the gripes there is a great deal; besides, under the shivers may be lurking inflamed lungs. Very hard water generally occasions these symptoms. As by exposing it, however, to the sun for a few hours before using it would prevent such unpleasant effects, the ostler should not be given his fee if he omitted this little attention. Where figging does not produce the desired benefit, a ginger-ball should also be administered. Should a shivering seize the horse after exposure to rain, figging and a ginger-ball will be found of the greatest service, frequently preventing serious after illness.

While treating of this subject, it may be as well to follow it up with a few other observations. Ostlers and stable-keepers, who generally farm or rent the stables from the innkeeper, often stint the horses of their food, upon the pretext that they cannot eat so much when they are thirsty and feverish, as they would if they were perfectly cool and tranquil. These stable-people know that the owners of horses are mostly satisfied, if they see hay placed before their steeds

uneaten ; but not only will horses, if duly supplied with water, consume the small quantity of hay allowed them, but also a good proportion of their bedding. Some persons may object to giving their horses an unlimited quantity of water, from a notion that it may cause too much purging. This idea, however, is not founded in reason, because when the horse is abridged of his due allowance of corn, he is apt to drink too eagerly and too largely, if he have the opportunity and there be no check imposed upon him ; but if he be brought to a full allowance by degrees, water will have no injurious effect upon the bowels. Begin by giving him as much as he likes on a Saturday night ; then tie a pailful in the corner all Sunday, until you start again on Monday morning (this is under the supposition of your being a commercial traveller ;) and always after giving him water, to observe the directions already recommended. The advantages derived therefrom will be soon experienced. Heed not the opposition of ostlers and others, but look yourself to your orders being properly obeyed. You will then be amply compensated for your trouble, by your horse being better able to go through with his work, and by his lasting longer than he could possibly do under the starving system. The principal theories entertained by thousands upon this question are pure absurdities. Nature is not guilty of creating false appetites, when animals are in a state of health ; yet is she frequently accused by the ignorant of this preposterous error. Stablemen are not so much to be blamed on this account, as the owners of horses ; the former not having means of knowing better equally with the latter : and being the mere slaves of custom and prejudice. In their dietary plan, they are clamorous and bigoted enemies to all innovations. If owners of horses were but true to themselves and charitable to their beasts, the practice of drugging, or of giving them water of the most

filthy condition, would speedily cease. One would almost imagine at times, that ostlers were of opinion that water cannot be too dirty, and that it is so much the better if harness has been washed in it, or if it has been mixed with dust, rancid oil, or blacking. With some grooms, nay, even owners, soapy water, in which the legs of other horses have been washed, is not considered unwholesome. Now, the fact is, the horse is quite an epicure in his water; he will undergo the utmost deprivation before he will drink anything uncleanly; but, as drink he must, if he cannot obtain the pure element, he gradually becomes inured to any nauseous mixture that may be placed before him. He would be too happy in his servitude, if he could even get enough to satisfy his thirst of the abominable liquids with which ostlers are too much in the habit of supplying him; but, no; the stable-keepers, fancying to show off their own superior acquirements, deny him this miserable gratification.

It would be superfluous to show the various ways in which dirty water must be injurious to the animal's health; but there is one absurdity so glaring, and which is so clearly illustrative of the bad consequences arising from stinting the horse of this indispensable beverage, that it must suffice without going more into detail. Why is nitre given in the horse's water? "Because," you reply, "I observe my horse to be feverish, and I, therefore, give him the nitre to prevent his drinking too much, and for the purpose of removing the fever." How do you expect the nitre to operate? "By increasing the secretion of the kidneys, thus lessening the quantity of blood." This is the meaning of what an inquirer would be told by stablemen and those who put faith in such authorities. The extreme folly of this sort of reasoning may be plainly exemplified. In a full state of health, the veins and arteries must always

have a certain distention, or, in other words, the fluids and solids must bear a relative proportion to one another. Nitre diminishes fluid, and in what way is it proposed to recruit this expenditure of the animal juices? Does not the increased thirst of the horse indicate as plainly as nature possibly can, the cure of fever? Give the animal as much water as he will drink, when he has fever upon him: it is better than nitre; the fluids will become thinner and the end desired answered. But will it act upon the bowels and purge the horse? Yes, and upon the kidneys also, and will most likely carry away all traces of fever. Good, but purging weakens the horse. This is a mistake. While there is fever the horse must be weak; remove the fever, and he becomes again strong; or to be more explicit, any deviation in the pulse from the natural standard must cause weakness; restore the pulse to the natural standard, and the horse, or the man, no matter which, will become well. The water, therefore, in the sense in which we are speaking, acts particularly as a tonic, recovering the strength of the horse, by reducing his pulse to its proper state. Water, regarded in any respect, is a tonic. Let a bountiful supply of it consequently not be deemed adverse to the health or constitution of the horse. It completely drives away fever, not allowing this insidious disease to work about the frame until it permanently settles in the feet or attacks the lungs. Neither with a due supply of water need a horse be sent to grass to prevent his becoming *groggy*. Give him plenty of this element, and not over-drive him, with ordinary care in other respects, and he will be almost certain to preserve his feet and body cool, his coat good, and his eyes perfect; in short, he will be sound and healthy.

STUMBLING.

WHEN this is not the consequence of malformation of the horse, it is to be prevented; and even if the make of the animal be such that he cannot avoid falling when he is leg-wearied, it is to be relieved, and leg-weariness eased, by attention to the preceding observations on food, mashes and water. The strength and courage of a horse are sustained by a sufficient quantity of nutritive food. Mashes serve to keep off that low fever, which, if not prevented, ultimately ruins him. But water has more than all to do with the prevention of fever, by assisting the proper digestion of the food. What pain and fever will not indigestion produce! Yet the horse is denied the proper use of the important functions of the stomach, by being stinted of his cheapest aliment, water. At the hazard of a little repetition, it must be repeated, that water dilutes the blood and fluids, and by promoting the natural secretions, is most important in preventing fever. No horse will become painfully costive, if due attention be paid to him in this particular; and here again, every one must be sensible that the regularity of the bowels is essential to the preservation of health. Now, horses subjected to good treatment in the way prescribed, will be infinitely less liable to that slow fever which is the sure precursor of inflammation of the feet. But this disease once generated, the poor horse is obliged to step short and on his toes, as well as often to drop from sheer pain at every stone he steps upon; when, if he happen to be leg-weary at the same time, from long toil, down he goes, to the great annoyance and mortification of his owner.

When a horse is first observed to stumble, stopping and serge round the feet (as described at page 20) should be tried. Give him a short allowance of

water at night, and as much as he will drink just before starting in the morning. The adoption of this plan will answer the purpose of a dose of physic, and will probably prevent inconvenient stoppages on the road, for the express purpose of giving him medicine. Should this, however, not answer the end desired, the feet should, at the same time, be bathed in warm water, and wet woollen bandages applied to them immediately. Leather soles put on for one shoeing, will also be of service. If leg-weariness be the cause, and the directions given in this work should fail, physic to relieve the inflamed muscles and over-wrought tendons, or turning out to grass, are the only remedies. But when a horse is physicked in order to make him fresh for work, his losing of flesh must not be regarded, and then he will soon recover. He should be fed almost wholly on wet bran, and given one dose of moderately strong medicine almost before the other is set, that is, nine or eleven days will be required for the three doses.

SWEATING.

As much stress is laid upon the sweating of horses by stable-people, and is often made one of their excuses for laziness in not giving them more water, a short space cannot, perhaps, be better employed than in explaining its uses, particularly as there seems to be an unaccountable dread of the secretion of the juices in the animal. Perspiration is a wise provision of nature to moisten the skin, as well as to prevent fever, when the blood is forced into violent circulation by exertion. Water, therefore, by diluting the fluids, and enabling this process to go on more freely, keeps down fever. This is another of the horse's best friends, but condemned by the stablemen as his enemy, because it occasions them a

little more trouble in cleaning; particularly, if he should be a thick, long-coated one, and horses of this description are most liable, from shortness of breath, to feel a quick pace. Not but that it would be much better, if, when the horse begins to perspire, the pace were slackened, until he becomes cool again: for when the animal is urged into a violent sweat, the probable issue is a violent fever, if profuse perspiration does not come to his relief. The danger is where this secretion is not in proportion to the exercise the horse has undergone.

Even when in a state of perfect tranquillity, with the pulse at its ordinary beat of about forty vibrations to the minute, the insensible perspiration of a horse, in good condition, is very great. The loss of so much moisture must be repaired, or there would be too considerable a draught upon the fluids, and a proper degree of health could not be maintained. But the pores are again replenished by an adequate quantity of water. As well might a horse be expected to bear up against all the wear and tear occasioned by his work, without food, as to suppose he could endure a waste of fluids without injury, unless something supplied their place.

SHOEING.

WHERE the feet or hoofs are very strong, it is always best to drive the horse through the summer months, with only tips, or half or three-quarter shoes, as the case may require. When the latter is used, the inside heel is to be free from iron. Corns and thrushes are often cured by this treatment, the heels much opened, and the feet altogether improved. But to no kind of foot is it of equal advantage as to the very strong, crusted, contracted, brittle foot, which *clever* stablemen, in order to make it last for ever, have spoiled by their oils and their stoppings; thereby

preventing perspiration, thickening the horn, and producing fever. They make the hoofs so narrow that the horse steps with pain, and so brittle, that they can hardly be got to hold nails enough to keep on their shoes. This sort of foot cannot be kept wet enough; but when it has been subject to this vile treatment, it may be brought round by the following means.

Never allow the feet of your horse to be oiled, or blacked, or polished. Either is extremely injurious, and is never done but by *lazy* fellows, who wish to make the hoofs appear as though the proper labour had been bestowed upon them, when the reverse has been the case; but even in this they do not always succeed, and what is it to them if they ruin the horse? What can look nastier, on a fine dry day, than these oiled hoofs, covered with dust, as they must be, before they have been on the road five minutes? On wet days they are as bad; the blacking looks better for a few minutes longer; but if the hoofs be narrowly examined, it will probably be found they have only been half washed, and then bedaubed over to conceal the remaining dirt. Oiling also makes it more difficult to wash the hoofs clean, and so the oiling grooms do not attempt so arduous a task. But by putting wet serge round the horn of the hoof, a more beautiful appearance is attained, than can be conceived by those who have never seen it.

Why should we seek to hide the horse under thick coats of injurious substances? Is not the horn of the horse, when smooth and clean, a pleasing object? Little dust will adhere to it, when not doctored, and that little may be brushed off in a moment with a rubber or pocket handkerchief; but not so when the hoofs are blacked or oiled. The mud may also be removed from so smooth a surface, with the utmost ease, by a wet sponge, or any other substitute. These

considerations do not escape the groom who understands his business and performs his duty. But when you have to deal with tea-kettle grooms and ostlers, (and these are the class of people designated stablemen in the present work,) nothing but the eye of the owner of the horse can produce any effect upon them. They consider not the good of the animal itself, nor have they any laudable pride in the appearance of the horses they turn out of their stables. If the latter pass muster at all, that is all they care about; and the less knowledge of horses their owners possess, the more advantage they take of them.

Never buy a horse with pummice soles, for any other than slow purposes. This is a disease which has been brought on by violent inflammation of the feet, destroying that support which ought to subsist between the sensitive part of the foot, and the crust through which the horse throws all his weight upon the sole of the hoof, pushing it downwards, and rendering him subject to severe concussion at every step. A horse of this kind is, therefore, unfit for travelling, as it is impossible to tell where, or how soon, he must unavoidably be left behind.

It is an excellent plan, particularly in cold weather, when a horse comes in heated, to have his feet and legs (but not higher than his knees) washed with warm water, and then a bandage put round the legs till they become dry. If the bandages be dispensed with, then should the legs be rubbed until all external moisture has been removed, especially in the fetlock. This will always prevent cracked heels, and where symptoms of these have already been observed, they may be mostly cured, in two or three days, by an application of an ointment, consisting of a little burnt alum and hog's lard. If, however, they should not get better, under this treatment, in the course of four days, just wet the chaps with vinegar

and a slight admixture of blue vitriol. Under proper care, the cracks will be washed clean and rubbed dry the moment the horse gets to his resting place, and the above application is used immediately afterwards.

All persons travelling on the road should carry with them one of those shoes which are nailed upon a leather-sole, and fastens on with buckles and straps, in case of accident; such as in the event of the horse overreaching, *i. e.* treading with his hind shoe upon the fore one, and tearing it off; or lest a shoe should come off from any other cause or circumstance, which in remote districts, and where farriers are scarce, may occasion much inconvenience and annoyance, as well as injury to the horse. It may probably happen that you have to travel miles before you reach a farrier's, and in the mean while, the unfortunate hoof becomes so broken that a nail cannot be driven into it, or so bruised as to need a poultice, or else a day or two's rest. Whereas, by being provided with one of the shoes above described, it may be readily buckled on, and it enables the traveller to proceed with comfort and safety, without loss of time, anxiety or vexation. Where the hoof is broken, there is only one remedy, that of getting the horn to grow again as quickly as possible; and the speediest method of effecting this object, is always to keep the hoof wet.

THE MOUTH.

MUCH of the satisfaction which a horse is capable of affording his master depends upon the way in which the latter manages the mouth. As the lasting qualities of the horse, as well as his temper, his appetite and endurance, the safety of life and limb, all depend, in great measure, upon judicious treatment in this important respect, no apology is neces-

sary for offering a few observations on this branch of the subject. Not that any remarks here made will materially serve to teach the science of the hand in the application of that science to the mouth of a horse; but what is of much more consequence to men of business on the road, a few words may possibly answer the purpose of enabling them to obtain a more entire control over such horses as fall in their way. The man of business has no time to devote to a study of this description, and even if he had, without the assistance of a competent instructor, he would be at the best sadly imperfect. Nor would he, with every advantage from books and teachers, acquire a knowledge of it on the road. Any attempt to gain experience in it there, would only have the effect of knocking the horse up and wearing him out; exemplifying the wisdom of Lord Pembroke's advice already quoted. It is, therefore, chiefly to the man of business that these instructions are addressed. Yet others may derive some benefit from them; those for instance, who have not the inclination to study the various peculiarities and tempers of horses, and who would submit, not only to natural, but to acquired bad habits in them, rather than take the least trouble to avail themselves of the means supplied by nature herself of curing their defects, developing the beauties of their shape, or improving their paces. The same reflections may also be serviceable to another class of persons, who expect one horse to perform the work of two or three.

With regard to *making* the mouth of a horse, or teaching him any thing new, or improving his paces, the first thing to be observed is, that he must be fresh, and only taken out of the stable for a short time at every lesson, while being taught, and until he is completely fixed in that lesson, or all the labour will be vain. It is the mode of teaching them that makes horses which carry themselves well, valuable;

and because there are few qualified to teach, and still fewer to use them judiciously afterwards: but if once set by a good hand and accustomed to a good jockey, it will be long before they lose the habits they have been taught. But if only recently set, and then put to hard work, under an inferior hand, their good carriage will speedily vanish. This is also another reason, in addition to those already adduced, for preferring aged horses—the age recommended for work—as the carriage they have at that time they will probably continue to retain, unless dreadfully overworked indeed, or used in a way contrary to nature, instead of being left, as recommended, as much as possible to themselves; for the best carriage in the world may be easily spoiled.

First, then, as you cannot accommodate your hand to the horse's mouth, nor are able to make his mouth acquainted with your hand, furnish him with a bit in which he can go comfortably; then let him keep on at his natural pace, never urging him forward, except you find him *coming within your hand*; that is, if he keeps himself from letting you feel that he is touching the bit, do not make him press hard upon it, as by so doing he would be knocked up. To urge him to pull one or two pounds at your hand is pull enough. Keep in mind the words of Lord Pembroke already quoted, "Do not mind how the horse carries himself, so that he carries you." The grace and elegance of a parade horse would soon be lost, if he had to perform journeys. It would be impossible for the dancing master, if compelled to work as a ploughman, to preserve his elasticity of gait. Why, then, expect it in the horse? Rather use mild bits than severe ones, less harm resulting from the former than the latter.

SADDLE AND HARNESS GALLS.

It is highly important that the harness should be properly adjusted, leaving room under the bearing hook of the saddle, and between the latter and the wither, to put in one finger easily, when the saddle is pressed hard down to the horse's back; otherwise the nut of the hook may press upon the back-bone, which will most probably produce a sore back; even should he not be thrown down and break his knees into the bargain. Slight pressure in this part is often the cause of stumbling. Care should be taken that the pannel stuffing be kept soft and smooth, which may readily be done by causing it every now and then to be dried by the fire, or in the sun, and then beat with a stick. These minute directions to some may appear trifling, but those who have been plagued with a horse with a sore back for some months, together with the repeated charges for fresh stuffing, &c. &c., will not be unthankful for the knowledge of a preventive. Neither should the saddle press on the back-bone at the hind part, or curtle, as this would occasion the horse to drop behind, and sometimes to lame him. It is better to have a collar rather small than large. A large collar is sure to wring the horse's neck; a small one never will. Should a horse, however, have a swelled back, the place should by all means be bathed for some time with moderately hot water, and the pannel-stuffing dried and beat as above directed. It would be well to bathe the shoulders with alum and cold water, till the swelling subside; and as the swelling is occasioned either from the inside of the collar being dirty, or from being too large, let the inside be well washed, or the collar altered as circumstances may require.

The collar should always be what saddlers call false lined with baked horse hair, which will render

it (the collar) soft and pleasant to the shoulders. Should a buckle chafe in any part, remove it; or if this cannot be conveniently done, let a safe be placed under it.

In order to cure a sore back, where the skin is off, bathe the place every morning with warm water, and also at night, when putting up; taking care, after each bathing, to apply a little ointment made of hog's lard and burnt alum, spread on a piece of linen; (the full size of the sore;) and then be careful that the pannel be so charnelled as to prevent chafing. A few days will effect a cure.

Again: if, from friction, the neck should become raw before any injury is observed, no time should be lost in bathing it with warm water, and rubbing in the alum ointment, which may be obtained at any chemist's. But mark, the collar must be prevented touching the sore. When warm water is mentioned, it is not meant to be more than temperately warm, and not so hot as to scald; yet still as warm as the animal can conveniently bear it; for it should be remembered that water only moderately hot to the hand, may be sufficiently so to scald the horse.

A breechen should always be used, in order to prevent the crupper cutting the tail, in descending hills. The crupper should also be loose; a tight one will often provoke a horse to kick; even where the tail is not rubbed into a state of rawness.

It is proper to observe that the front of the winkers be kept wide enough from the eyes of the horse. This precaution will prevent the winkers pressing upon and inflaming the eyes; and at the same time prevent him seeing behind them, as he mostly can when they are tight in front.

It is better to have the weight thrown off the back, than upon it; that is to say, let the shafts at the back-hand be rather too high than too low. It should always be particularly observed whether the back-

hand and tugs are in good order ; as also the traces, which take the splinter at the eyes, and at the buckles.

The reins are also of first-rate importance in the trappings of the horse. Nothing can be more necessary than to see that the tongues of the buckles be well tied before they are used, as they not unfrequently give way even in new reins. Next in importance to the reins is the brace, which holds the splinters to the body of the chaise ; for if the brace should give way, and let the splinter come against the hocks of the horse, he is almost sure to kick and run away.

The shafts, particularly if made of lancewood, should occasionally be examined about the step, and thence to the backward tug.

BAITING.

IN travelling great distances, it will be better to bait about every ten miles ; let the horse then have a few mouthfuls of hay and as much water as he chooses ; with a feed of corn and water at the end of every twenty or thirty miles ; making the intermediate distances as convenient as possible. The horse will be rarely incapacitated, so long as he retains his appetite ; and, if thus fed, he must be exceedingly overworked (provided he has any pluck and be properly driven) if he lose his appetite.

There cannot be greater folly, or something worse, than in boasting of having driven a horse fifty miles a day *without baiting*. To say nothing of the cruelty of such usage, what state must the horse be in the next day ? How long can he endure such treatment ? And in what condition would he have been under a course of discipline such as is here recommended ? It would be well for the thoughtless to ponder these questions. Others say that their horses *will not* feed upon a journey ; if so, it is useless to take them out.

But what is the reason of their not feeding—**MIS-MANAGEMENT**. This mismanagement originates either in the stable, or consists in over driving, or in inflicting unnecessary punishment by the whip. Horses coming under this description, *i. e.* those who reject their food when on a journey, are generally nervous and of high mettle; but if mismanaged, they become not worth anything; properly treated, they are very good animals.

The foregoing directions are given upon the hypothesis that the horse has been treated by the rules laid down in these pages. Should, however, this not be the case, the only difference to be made is, to allow him as many (*go downs*) swallows of water, from five upwards, as his previous habits may warrant; but, under any circumstances, let him not be restricted in water, until he is inclined to eat. Should he not be inclined to eat without an immediate quantity of water, drive slower for the next few miles. Six quarts of water, in many cases, will not inconvenience a horse more than a glass of beer would a man.

It is scarcely necessary to observe, that attention to frequent baiting is the more necessary in winter. Some persons object, on account of losing time, to baiting too often. This objection, however, is perfectly frivolous. To call at an inn door, and get the ostler to undo the curb, and have the bridoon taken out of the mouth, while the horse drinks and eats a few mouthfuls of hay, need not occupy more than three minutes; while the renewed freshness of the animal will amply compensate the delay and the expense. Persons who are so unfeeling as not to be able to afford time to bait their horses, find ample leisure to refresh themselves much longer than it would be necessary to reinvigorate the partially exhausted frames of their faithful and hard-working nags. Besides, attention to the natural wants of a horse must of course preserve his vigour, and in-

crease his ability to perform his daily duty. To neglect a matter so important as that of supplying a proper quantity of food, is the same as deliberately contriving the destruction of the poor animal. Under all circumstances, therefore, if the traveller desires to preserve the health and mettle of his horse, he will always refresh his nag when he needs refreshment himself. It is proverbial, that a good master is always merciful to his beast.

BROKEN KNEES.

PERSONS who have travelled much have probably observed, that horses accustomed to road-work, particularly if they should come under the description of those which are let out to hire, or those belonging to commercial travellers, are frequently broken-kneed. If you inquire of these traffickers in horses the reason of so many animals being blemished in this manner, they will generally give the most unsatisfactory answers. They tell you it is by throwing the horse down, but which is a phrase appropriate only in certain cases. By over-working a horse, and so making him weary on his legs, he will probably fall, and so far the phrase of throwing him down may not be incorrect. It is scarcely possible to throw down a good horse under proper treatment, but, under contrary usage, it is equally difficult to keep him firm upon his legs.

Those who pique themselves on their superior knowledge of horses, are precisely the persons who are the most liable to meet with accidents to their nags; because the knowledge of such persons is always shallow, and rather vain-boasting, or pretence, than otherwise. Paradoxical though it may seem, the worst as well as the best horsemen meet with the fewest accidents by falls. A good rider or driver allows his horse to go as he pleases; the ani-

mal, therefore, does not fatigue himself uselessly; as his master exercises the precaution of taking advantage of circumstances to assist him as much as possible. A bad rider is too timid to play tricks with a horse, and the animal is consequently, from a very different cause, left much to his own way, and thus there is the less liability to accident in this case. But the self-conceited rider, or driver, mars nature, checks the animal in his step, ultimately renders him what is termed *tied in the shoulders*, and is always keeping him on the fret. The result is, that the horse becomes leg-weary much sooner than he would otherwise be, and hence he is more apt to stumble and fall. But if you ask a gentleman of the description alluded to, why he thus keeps his horse in a continual fidget, the answer would probably be, that it is to *keep him up*.

But as accidents, from a variety of causes, will be ever occurring to horses, it will not be irrelevant to say something as to the mode of cure, as well as the means of prevention. In the case of injured knees or falls, as soon after the accident has occurred as possible, the knees should be well bathed for some time with hot water, even though they should not be grazed; as this timely precaution will tend to prevent swelling from a bruise. If the knees should be cut, they should be well washed and cleansed from even the smallest particle of gravel they may have received. Let them afterwards be well bathed for a moderate period; but no grease of any kind should be applied to the wounded part. If the cut be not deep, a little burnt alum, finely powdered, and laid over the place, so as to dry it and keep off the dust, will suffice; but if the wound should be of a more serious nature, the better plan is always to call in the assistance of a veterinary surgeon. Ostlers or stablemen, in cases of this kind should never be trusted; their nostrums, or supposed remedies, are

invariably worse than the disease. The application of grease is always injurious, yet ostlers will persist, if you let them, in using it upon every slight occasion: it always irritates the skin. When it is desirable to conceal a hurt, it may be done by mixing up a little soot with burnt alum.

BREED OF ENGLISH HORSES.

THE breed of these useful animals may be described generally under the following denominations:

The Road Horse.

The Farmer's Horse.

The Coach Horse.

The Heavy Draught Horse.

The Dray Horse.

The Cavalry Horse.

The Race Horse.

The Hunter.

Galloways and Ponies.

Upon each of these we propose to say a few words.

THE ROADSTER.

THE roadster, or hackney, is the one to which the foregoing pages have been chiefly dedicated; and as so much has already been said upon that part of the subject, it may not be inappropriate to conclude it with the following instances of the sagacity and fidelity of this noble animal.

The memory of the horse is astonishing, and here is proof of the averment. A gentleman rode a horse from his own residence to a distance of thirty miles, in a direction the horse had never gone before. The road presented difficulties, but the gentleman at length reached his destination. Two years elapsed, and the same party had again occasion to take the same journey; but the horse had not traversed the

ground in the interim. Before he reached his journey's end, the gentleman was benighted, and lost his way, but trusting to the sagacity of his steed, he threw the reins upon his neck, and in half an hour was at his friend's door.

A foreign Professor, of Halle, relates the following :—A friend of his riding home through a wood in a dark night, struck his head against the branch of a tree, and fell from his horse stunned. The steed immediately returned to the house which they had lately left, and pawed at the door until some one rose and opened it. The animal turned about, and the man, in astonishment, followed him : the faithful and intelligent animal led him to the place where his master lay senseless upon the ground.

Hundreds of other similar anecdotes of the sagacity of the horse might be added if space permitted, or if there were any novelty in relating them.

THE FARMER'S HORSE.

THE farmer's horse is one that has to undergo all sorts of drudgery, both for business and pleasure ; ridden or driven to market, or church, or on a visit to some rather distant neighbour, or sometimes lent to a friend to go anywhere. For this kind of horse, the best standard is reckoned about fifteen hands and two inches ; that is, higher than the road horse. An animal, with a shoulder thicker, lower, and not so slanting, as that in the roadster, is preferable for the collar ; and collar-work is that for which the farmer's horse is chiefly destined. Horses for this purpose should be stout and compactly built, without being particularly heavy ; and if they are half-bred, meaning that they have some blood in their veins, so much the better. The farmer's horse requires both weight to push forward, and activity to get over the ground.

Formerly there was a prepossession among farmers in favour of huge, bulky horses, but that has declined, and given way, in a considerable measure, to more rational notions. What the farmer really requires is a horse of moderate size, but strong and active; not one large in make and slow in progress.

It cannot, however, be expected that horses used at the plough, or in draught, will be found the most agreeable saddle or pleasure horses; but what does a small farmer want with a dashing steed? If his horse will carry him to market or to church, and perform his week-day's work, he ought to be satisfied; but if not over-worked, or over-weighted, he will go comfortably enough on other occasions.

A farmer, not in an extensive way, should always prefer a mare to a gelding. There is less cost in the purchase, and more work to be obtained in the end, with the former than the latter; besides, there is advantage to be derived from her breeding; and she may be rendered useful while breeding, if worked moderately.

The Arabs are perhaps the best judges of horses, as well as the most considerate masters of them, in the world. They set the highest estimation upon mares, and are thoroughly convinced, that the value of the foal depends not so much on the sire as on the dam; for which reason they refuse very large prices for mares of high-blood. It may also be observed, that they trace the pedigree of a horse not through the sire, but through the dam. The following quotation from Bishop Hall, who wrote in the Elizabethan era, may be here appositely introduced

“ Dost thou prize
Thy brute beast's worth by their dam's qualities?
Say'st thou this colt shall prove a swift-paced steed
Only because a jennet did him breed?
Or say'st thou this same horse shall win the prize,
Because his dam was swiftest Tranchefice?

Much useful information on this subject may be found in a work by Mr. Roberts, entitled "The Veterinarian."

THE COACH-HORSE.

THE coach-horse has improved with the refinement of the times. He is not now the same vulgar animal he was wont to be in by-gone days. He has cast off his old-fashioned, stiff-looking coat, and mounted one of modern gentility. Formerly he was one of the most clumsy, unmannerly, ill-begotten, misshapen animals in the world; and just as well qualified to be harnessed to a dray as to a chariot.

We shall here take leave to borrow a few passages from old writers, and others, in relation to this topic.

Wheel-carriages, or *whirlicotes*, as they were then called, came first into use so long back as the reign of Richard II., about the year 1381. We are told by Stowe, that "Richard II., being threatened by the rebels of Kent, rode from the Tower of London to the Mile's-end, and with him his mother, because she was sick and weak, in a *whirlicote*;" which consisted of merely four boards put together in the rudest manner. Side-saddles afterwards became the fashion, until the time of Elizabeth, when coaches were first used. Recurring again to old Stowe, he says, in his Survey of London and Westminster, "Divers great ladies made them coaches, and rode in them up and down the countries to the great admiration of all beholders;" adding, with a quaintness peculiar to the times, "the world runs on wheels with many whose parents were glad to go on foot."

The clumsiness of the horses, and the cumbrousness of the vehicles, rendered this mode of travelling, for a long period, any thing but speedy or pleasant. On the demise of George II., the Duke of Devonshire, the Lord Chamberlain, arrived in

town from Chatsworth, in Derbyshire, in three days; but the Duke of Rutland, not being equally expeditious, Mr. Speaker Onslow apologized for him, by informing the House that the Duke of Devonshire had travelled at "a prodigious rate, not less than *fifty miles a-day*."

A stage-coach, at that time, took the whole day to travel from London to Epsom, a distance of only sixteen miles, and the passengers dined upon the road. From Edinburgh to London, between which cities there was only one monthly conveyance as a stage-coach, the time occupied in performing the distance was from sixteen to eighteen days.

Hackney-coaches were first introduced in London in the reign of Charles I.

The principal points of the coach-horse are those which qualify him for endurance of hard work; a deep and well-proportioned body, bone under the knee, substance in its right place, and sound, open, tough feet.

The origin of the coach-horse is the Cleveland bay, but, perhaps, with a mixture of other northern counties besides Yorkshire.

THE HEAVY DRAUGHT-HORSE.

HORSES of this denomination are descended from the Norman stallion and the Suffolk cart-mare; but the true Suffolk (and the same may be said of the Cleveland) is now nearly extinct. It stood from fifteen to sixteen hands high, of a sorrel colour; was large-headed, low-shouldered, and thick on the top; deep and round-chested, long-backed, high in the croup, large and strong in the quarters, full in the flanks, round in the legs, and short in the pasterns. The present breed inherits many of the good qualities of the original; it is more or less inclined to a sorrel colour; is taller, higher, and finer in the

shoulders; and is a cross with the Yorkshire, half or three-fourths bred.

The old Suffolk possessed remarkable nimbleness of action, and the modern breed has not entirely lost it. The cart-horse has this peculiarity; he knows the extent of his powers, and failing to accomplish the task imposed upon him, no exercise of the whip, or any other method of spurring him on, will succeed in making him exert his strength, and strain his muscles in vain. The Suffolk punch is now greatly changed from what he was in his high and palmy days. There is also the Clydesdale breed, very good for hilly farms; and the *heavy black horse*, bred chiefly in the midland counties from Lincolnshire to Staffordshire. They are sold by the dealers in the London market at a handsome premium.

THE DRAY HORSE.

THIS kind of horse should have a broad breast, with thick and upright shoulders, a low forehead, deep and round barrel, loins broad and high, ample quarters, thick fore-arms and thighs; short legs, round hoofs, broad at the heels, and not too flat in the soles. The heavy draught horse has been latterly much crossed by the Flanders' breed, and evidently to advantage. Those attached to brewers' drays are generally animals of the finest description, large, muscular, and in excellent condition. They always know what they are about, and are corrected as easily as a child, or more so, and are perfectly docile. The dray horses in the metropolis, and other large towns, are of inestimable importance.

THE CHARGER, OR CAVALRY HORSE.

THE noble animal bearing this name is not trained for vulgar uses, either on the road or at the plough;

but to shine upon the parade, and for prowess in the field of battle. Great judgment is requisite in selecting horses of this description for the service. Under the system now considered obsolete, the horses of our dragoons were chosen rather for their bulk and strength, than for their lightness and activity. It seemed as if it had been thought that an imposing appearance was the only thing desirable; but a change has since taken place in this respect, and war-horses have latterly been selected for their nimbleness and capability of getting over the ground. The artificial method of training a cavalry-horse, so as to make him at once showy on the parade and courageous in the field, must necessarily disqualify him for commonly useful purposes. This innovation, however, on old notions, may be carried too far: every one knows the fate of the French cuirassiers, when opposed to our household troops at Waterloo. It was the weight of the horses that carried the day; and to this Wellington was indebted for his triumph, and to this did the conqueror of many nations owe his final downfall.

But, although heavy horses may overcome lighter ones in fierce collision, there can be no question that light horses are of superior value in skirmishing or busy campaigns.

The port and demeanour of the charger can never be mistaken. He appears, like the eagle, ready to soar into the heavens. His eye is bright and sparkling; the neck is curved in the form of a beautiful arch; and his breast protrudes in graceful majesty. In a word, he is a splendid creature.

“The fiery courser, when he hears from far
The sprightly trumpets and the shouts of war,
Pricks up his ears, and trembling with delight,
Shifts place, and paws, and hopes the promised fight.
On his right shoulder his thick mane reclined,
Ruffles at speed, and dances in the wind:

His horny hoofs are jetty black and round ;
His chine is double ; starting with a bound,
He turns the turf, and shakes the solid ground :
Fire from his eyes, clouds from his nostrils flow,
He bears his rider headlong on the foe."

Mr. Rogers, the author of *The Pleasures of Memory*, a delightful work, has three lines upon the charger, worthy of being repeated :—

"And when the drum beats briskly in the gale,
The war-worn courser charges at the sound,
And with young vigour wheels the pasture ground."

It would be almost unpardonable not to notice the epitaph upon the charger of Sir Ralph Abercrombie, who was killed at the battle of Alexandria, in Egypt, on the 21st of March, 1801, and who was father of the late speaker of the House of Commons, now raised to the peerage by the title of Lord Dunfermline. His gallant steed received, on that memorable day, no less than seven musket-balls and two sabre-cuts, and afterwards became the property of a person of the name of Watson, at Malta, which person placed a stone over his remains, in the following words :—

"Here lies the celebrated charger of the late Lieutenant-General Sir Ralph Abercrombie, who was killed at the memorable battle of Alexandria, 21st March, 1801, where this noble animal received, on that glorious day, seven musket-balls and two sabre-cuts, when he afterwards became the property of John Watson, of Malta, who placed this stone over his remains, in token of his rare services, peculiar qualities, high spirits, and good temper. This esteemed horse departed this life of miseries, September 12th, 1823, aged thirty-six years,

'Sua cuique voluptas!'

He is buried in the garden, under the southwest battery, at Marsa, near Floriland, in the island of Malta.

THE RACE HORSE.

It has been stated, upon good authority, that the race horse is not an aboriginal of Europe, but that it derives its breed from the warmer climes of Asia. It is undoubtedly a fact, that the horses of Great Britain surpass those of all other breeds, for the turf, for the chase, or for the road. The English race-horse in blood is nearly allied to the true Arabian courser, but is much larger, and is not to be surpassed by any coursers in the world. Take a thorough-bred English racer, and whether he is placed on the burning plains of India, or in the frigid regions of the north, it will be found that he has a spirit, a speed, and a courage, unequaled by any other quadruped of the same species in the world. It is related, that an ordinary racer has been known to go at the rate of a mile in less than two minutes; but there have been instances of horses running nearly a mile in *one* minute.

The form of the head of the English racer resembles that of the Arabian. The neck is beautifully arched, (one of the greatest beauties in the horse;) his shoulders are oblique and lengthened; his hind legs are well proportioned; his quarters ample and muscular; his whole legs, from the knee downwards, sufficiently graduated,

“Small by degrees and beautifully less.”

Thorough-bred is a term employed in Britain to indicate the descent of a horse from the Eastern, or Arabian courser; but there can be no doubt that the English racer has been much improved by the commixture of his blood with that of Asia. The horses of the first blood, remarks a good judge, or such as

are the nearest possible to the Eastern stock, are those immediately produced from an Arabian or Barbary stallion with an English mare, which has been already crossed with a Barb or Arabian steed in the first degree.

THE HUNTER.

THE hunter should be well bred, and the more allied to thorough-bred the better. The chief points to be regarded in his make, are, that he should have plenty of haunch; be well ribbed, or tight and trim built; of a full chest, with good hams; and a nose that will go into a quart-pot. The hunter is the field-marshal in the chase: he is one of the most spirited and courageous of animals, and his sagacity and judgment in leaping can scarcely be exceeded by any animals endowed only with instinct. In comparison with the race horse, he is inferior in blood, but superior in metal, and he may be taken altogether as the paragon of animals.

THE GALLOWAY.

THE Galloway is a stout compact horse, taking its name from the district so called, in Scotland, to the soil of which it may be said to be indigenous. It is comparatively small in size, seldom exceeding fourteen hands in height, but for mountainous and rugged districts is invaluable. The best properties of the Galloway are supposed to be its inheritance from the Spanish Jennets that escaped from the wreck of the Armada, in the time of Queen Elizabeth. The Galloway is generally of a bay colour.

Galloways are capable of performing prodigious work. In 1754, a horse of this denomination, belonging to a Mr. Corker, went one hundred miles a-day, over the Newmarket course, and without the slightest distress.

PONIES.

PONIES are horses in miniature; and, therefore, the treatment of animals of mature growth, is applicable to those of smaller size. The less may be consequently said upon this branch of the subject.

The *sheltie* is the most diminutive of the breed, and seems totally distinct from all others. In height it varies from seven and a half hands, and is probably one of the earliest breeds introduced into Great Britain.

DECORATION.

MEN have an uneasy propensity for improvement, which leads them to deform almost all the works of Nature of which they have control ; they cut down trees in one place, and plant them in another, to beautify the landscape ; they shave their own faces, hang ornaments on their ears, and deform their bodies ; they exclude the light of day from their houses to create an artificial night, and at midnight illuminate them with artificial light to create a mimic day. Even the horse, the most beautiful and most useful of all the lower animals, they strive to decorate by depriving him of the most prominent of his graces ; they convert his tail into a sightless stump, and his mane into a stubborn brush. But the true principle for man in morals, as in everything else, is to *let alone*.

Stablemen are not often blessed with a very keen perception of the beautiful in externals ; and their attempts at decoration in the case of the horse are generally extremely unfortunate. Many of their operations consist in removing something supposed to be noxious or superfluous. To judge of their propriety it is necessary to consider briefly the uses and properties of

HAIR.

It is intended to keep the animal warm, and being a slow conductor of heat, is well adapted for

preserving it; it absorbs no moisture, and when the horse is in health every hair is anointed with an oily fluid, which imparts a beautiful gloss, and repels moisture.

The hair is shed in spring and autumn; the winter coat is much longer and coarser than that of the summer, and requires more care to keep it in order.

Moulting, and the length and thickness of the coat, are much influenced by stable management and the weather. Horses that are much exposed to the cold have longer and coarser hair than those that are kept in warm stables. Moulting may even be entirely prevented by heavy clothing and warm stabling. Grooms often hasten the fall of the winter coat by extra dressing; but this can never be done without danger from exposure in unseasonable weather.

The hair which grows on the legs of horses is longer and stronger than that which grows on the body, because those parts are more exposed to the wet, and require a coarser protection; it is always longest in horses that are reared in marshy situations.

The hair of the mane seems to add greatly to the beauty of the horse, but it is only beautiful because it is useful; it protects the neck and head from flies, and in the wild state falls equally on each side of the neck. The hair of the mane and tail are deciduous, but they do not fall at regular periods like the coat.

DOCKING.

It has been supposed that the back becomes stronger after the tail has been docked; but the supposition is without a particle of evidence, and it is difficult to account for so gross an error. Some writers assert that the tail of the horse assists him in

turning, like that of the kangaroo, or the gray hound; and if this is true, as its action when running plainly indicates, cavalry horses and racers must lose a great deal of their natural power by docking. In addition to the manifest cruelty and absurdity of docking, it must be remembered that the operation very frequently induces lockjaw and death. But when docking is determined on, it should be done when the colt is but two or three months old, as at that early age it is less difficult, and accomplished with less danger than when the operation is delayed to a later period.

NICKING.

THIS operation is very justly getting into disrepute. Its object is to make the horse elevate his tail. Two or three deep incisions are made on the lower surface of the tail, the muscles by which it is depressed are divided, and a portion of them excised. The wounds are kept open for several days, and the tail is kept in elevation by means of pulleys and weights; but a better method of obtaining the same result is by using the pulleys and weights alone.

DRESSING THE TAIL.

IT was once the custom to colour the tails and manes of horses, and red was a very fashionable tint; but this practice has been abandoned. The hair of the tail is usually combed and brushed every day; and when it does not hang gracefully, frequent washings and combings will have a good effect. But if an exuberant tail is wanted, it should have but very little combing. Circus riders never, or rarely, make use of the comb.

DRESSING THE MANE.

IN general the manes lie to the right side ; but in some horses it is parted in the middle, falling equally on each side of the neck. To make it lie, the groom combs and wets it several times a day. When that is not sufficient, he weaves it into ten or fifteen plaits, with a piece of lead at the extremities. Draught horses should seldom have the mane or tail thinned ; they have a marked, stiff appearance when deprived of too much hair.

TRIMMING THE EARS.

THE inside of the ear is coated with fine hair, which is intended as a screen against rain, flies and dirt. It is a very common, but a very stupid practice to trim this hair away by the roots ; and the consequences must be sometimes highly disastrous. Cropping the ears was once frequently practised, but is very rarely done now.

TRIMMING THE FACE.

THE nostrils and lips are protected by long fine hairs, scattered wide apart, and standing perpendicularly to the skin ; these hairs perform the same functions as the whiskers of the cat, and are of great importance. The roots are endowed with a peculiar sensibility, and serve as sentinels to warn the horse of the presence of injurious objects. There are several grouped together above and below the eye. The slightest touch on the ends of these hairs is instantly felt by the horse. It is usual with grooms to cut these hairs off, but they can give no reason for doing so ; and the annoyance which the operation gives the horse ought to warn them to de-

sist from so unnatural a practice. The long hair which grows upon the throat channel and necks of horses, like that upon the human neck, is designed as a protection to the most delicate part of the system; and its removal causes fatal colds in both man and beast. The hair is sometimes trimmed from the neck of the horse by clipping and singeing. It certainly does not improve the looks of the horse, and cannot be of service in any other respect.

TRIMMING THE HEELS AND LEGS.

THE hair of the fetlock, the hollow of the pastern, and the posterior aspect of the legs, is larger in draught horses than on those of finer bone. It is intended to keep the legs warm, and to protect them from external violence; but it is the practice with grooms to cut this hair off short to the roots. There has been considerable question respecting the propriety of trimming the heels. Some contend that the hair soaks up the moisture and keeps the skin wet and cold, producing sores and scurfiness; but others, with greater show of reason, contend that the long hair, instead of causing those evils, is the only sure preventive of them.

SINGEING.

SINGEING off the superfluous hair which grows about the throat, neck, belly and quarters of the horse, is sometimes performed by stablemen in the same way that a cook singes a fowl; but it is more frequently done with a knife having a moveable back, surrounded with tow moistened with spirits of wine, and set on fire. As the knife is drawn over the hairs, their points start up and are taken off by the flame.

ARTICLES USED AS FOOD.

KINDS OF FOOD.

IN this country horses are fed upon oats, hay, grass and roots. Many people talk as if they could be fed on nothing else. But in other parts of the world, where the productions of the soil are different, the food of the horse is different. "In some sterile countries they are forced to subsist on dried fish, and even on vegetable mould; in Arabia, on milk, flesh-balls, eggs, broth, &c. In India, horses are variously fed. The native grasses are judged very nutritious. Few, perhaps no oats are grown; barley is rare, and not commonly given to horses. In Bengal, a vetch, something like the tare, is used. On the western side of India, a sort of pigeon-pea, called gram (*cicer arietinum*,) forms the ordinary food, with grass while in season, and hay all the year round. Indian corn or rice is seldom given. In the West Indies, maize, Guinea corn, sugar-cane tops, and sometimes molasses, are given. In the Mahratta country, salt, pepper, and other spices are made into balls with flour and butter, and these are supposed to produce animation, and to fine the coat. Broth made from sheep's head is sometimes given. In France, Spain and Italy, besides the grasses, the leaves of limes, vines, the tops of acacia, and the seeds of the carab-tree, are given to horses."

The articles upon which horses are fed in this country are usually arranged into three classes. That which possesses the least nutriment in proportion to its bulk, is termed *fodder*, and consists of grass, hay and straw; that which possesses the most nutriment in proportion to its bulk, is termed *grain*. This word is often used as if it belonged exclusively to oats; but it is a general name for all the kinds of grain and pulse upon which horses are fed. In this

work is used only in its general sense. *Roots*, such as carrots, turnips and potatoes, form the third kind of food. In relation to their bulk, they have less nutriment than grain, and more than fodder.

GREEN HERBAGE.

THERE are several kinds of green food, but the individual properties of each are so little known, that much cannot be said about them.

Grass is the natural food of horses. It is provided for him without the interference of art. It is composed of a great number of plants, differing much or little from each other in structure, composition and duration. Some of the natural grasses are to the horse mere weeds, destitute of nutriment, though not positively injurious. Several are rejected, or eaten only when there is nothing else to eat, and none are sufficiently rich to maintain the horse in condition for constant work, even though the work be moderate. At a gentle pace he may travel a few miles to-day, but he is unfit for a journey to-morrow. By cutting the grass and bringing it to the stable, the horse may be saved the labour of collecting it; but still he can render very little service.

Grass, however, or green herbage of some kind, is given to almost all horses during a part of the year. The young animals, from the time they are weaned till they are fit for work, receive grass as long as it can be had. Hunting and racing colts excepted, they receive little else.

It is commonly believed that grass has some renovating and purifying properties, not possessed by hay nor by grain. It is true that all the kinds of green herbage, including clover, saintfoin, lucerne, tares and ryegrass, produce a change upon the horse. But whether the change be for better or for worse, is another question. For the first two or three days,

green food relaxes the bowels and increases the secretion of urine and of perspiration. Very often it produces an eruption on the skin, particularly when given along with a large allowance of grain. When the horse is permitted to eat what he pleases, the belly becomes large. These effects may be termed immediate. They are most apparent at the commencement, but are visible so long as the horse receives any considerable quantity of grass. Green food produces other effects not so easily traced. Wounds heal more kindly, inflammatory diseases are not so fatal, and chronic diseases frequently abate, or they entirely disappear, under the use of grass. The horse, however, is always soft, when fed much on green food. He sweats a great deal, and is soon exhausted by his work.

Clover, Rye-grass, Tares, Lucerne, Saintfoin and the *Oat-Plant*, are all used as green food. So far as the horse is concerned, one seems to be as good as any of the others. They appear to produce the same effects as grass. Amid such variety we might expect to find some difference; but I have not been able to perceive any. Some horses, indeed, like one article better than another, but this seems to be mere taste, for no one of them appears to be generally preferred nor rejected. There are various opinions, however, as to the comparative value of these articles. Some affirm that clover is less nutritious than rye-grass, some that tares are poor watery feeding, and others that lucerne and saintfoin are the best of the whole lot. But opinion on the subject seems to be quite vague. Whatever one affirms, another will be found to deny. In Scotland, lucerne and saintfoin are very little used; but clover, rye-grass and tares are given each in their season, as if one were equal to another.

Beans, wheat, rye and oats, the whole plant, are sometimes, but very seldom, and never regularly

used as food for horses. Cabbage, and some other green articles, are eaten, but they deserve no particular notice. Several, which form the ordinary green food of horses in other countries, are not grown here. The leaves and clippings of the vine are much used in many parts of France.

Furze is generally used on the frontiers of France and Spain; and the British cavalry, while in the Pyrenees, under the duke of Wellington, had no other forage.

DRY HERBAGE.

IN Great Britain the dry herbage consists of hay and straw. In France the vine-leaves are collected and stored for winter fodder. In the West Indies the tops of the sugar-cane are deemed highly nutritious, after they are dried and sweated a little in heaps. In a season of abundance, ricks of the cane-tops the butt-ends in, are made in a corner of each field, to supply the want of pasturage and other food. These are chopped small and mixed with common salt, or sprinkled with a solution of molasses. Maize is sometimes made into hay. "When Guinea or Indian corn is planted in May, and cut in July, in order to bear seed that year, that cutting properly tended, makes an excellent hay, which cattle prefer to meadow hay. In like manner, after the corn has done bearing seed, the after crop furnishes abundance of that kind of fodder which keeps well in ricks for two or three years."* "In some places dried ferns, reeds, flags, small branches or twigs are dried and used as substitutes for hay."† Doubtless there are many other plants made into fodder, in different parts of the world. Where Canary corn is raised the chaff and straw are given to horses,

* Bracy Clark's Pharmacopœia Equina.

† Blaine's Outlines of Vet. Med.

from which it is said they derive more nutriment than from hay.

HAY.

IN Scotland, most of the hay used for horses is composed of rye-grass, or rye-grass and clover. The natural hay, which is not very much used here, contains several plants. Much of the hay in Scotland is bad. A good deal is grown on poor land, and this is soft, dwarfish, and destitute of nutriment. But hay in general is not well made. In the south it is cured with more skill, and preserved with more care. The best we have in the west of Scotland is procured from Stirlingshire, and is composed of rye-grass and a little clover.

In England clover-hay stands in high repute for hard-working draught horses. In the market it brings 20 per cent. more than meadow or rye-grass hay. Hard upland meadow hay is preferred for hunters and racers, because, I suppose, they are apt to eat too much of the clover. In Scotland, rye-grass, or a mixture of rye-grass and clover, is considered the best for all horses. Here we have almost no good meadow hay, and most of that made from the natural grasses is hardly worth preserving.

Good Hay is about a year old, long and large, hard, tough; its colour inclining to green, rather than to white; it has a sweet taste and pleasant smell; the seed is abundant; infused in hot water, it produces a rich, dark-coloured tea. The less dust it has about it the better; but, from the soil, and the way in which hay is made here, it is seldom free from dust. In damp weather hay absorbs much moisture, and weighs a good deal the heavier.

New Hay is purgative and debilitating. It seems to be difficult of digestion. [American hay is drier and better cured than English, and we be-

lieve that it contains more saccharine matter ; these observations, therefore, can hardly apply to it.] The horse is fond of it, and will eat a large quantity, much of which passes through him little altered by the digestive process, and probably retaining a good deal of its nutriment. On the other hand, hay which is very old is dry, tasteless and brittle. The horse rejects much and eats little. Old hay is much recommended ; but by old I suppose is meant not new. In the south, perhaps, stacked hay does not so soon degenerate as in the north, where it is certainly old enough in one year.

Heated Hay, sometimes termed mowburnt, is that which has undergone too much fermentation. In curing hay it is thrown in a heap to sweat, that is, till a slight degree of fermentation takes place, which is arrested by exposing the hay to the air. This, it appears, is necessary for its preservation in the stack. But sometimes the process is carried too far, or, more frequently, it is re-excited, after the hay is stored past. Hay that has been thus injured is not all alike. Some of it acquires a very sweet sugary taste ; and this portion is eaten ; some of it is changed in colour to a dark brown, and has its texture altered ; it is short, brittle as rotten wood, and has a disagreeable taste ; this portion seems to be rejected ; another portion of the same stack is mouldy, stinking, quite rotten, and no horse will eat this. All kinds of hay, however good originally, may suffer this injury. When the damage has been slight, most horses will eat certain portions of the hay very greedily ; they seem to be fond of it for the first week, but subsequently it is rejected in disgust. Upon the whole, I believe it is the most unprofitable fodder that horses can receive. When very bad it is dear, though obtained in a gift, for it often does much mischief, particularly to horses of fast work. Much is wasted, and that which is eaten

does little good. It is almost as poisonous as it is nutritious. Slow draught horses may not, indeed, be greatly injured by it. But good wheat-straw may be better. To fast, hard-working horses, such as those employed in mails, it is a strong diuretic; and its diuretic power does not diminish by use. Hay forms an important part of the horse's food, particularly of those horses that receive no roots nor boiled meat. Bad hay will change the horse's appearance and condition in two days, when he has an unlimited quantity of corn. By bad hay I mean that which is unwholesome. It may be poor, having little nutriment, but sweet and digestible without being pernicious. But good straw is better than unwholesome hay for all kinds of horses. The kidneys are excited to extraordinary activity. The urine, which, in this disease, is always perfectly transparent, is discharged very frequently and in copious profusion. The horse soon becomes hide-bound, emaciated and feeble. His thirst is excessive. He never refuses water, and he drinks it as if he would never give over. The disease does not produce death, but it renders the horse useless, and ruins the constitution. Should he catch cold, or take the influenza, which prevailed so much in Glasgow during the winter of 1836, glanders is seldom far off.* One ton of good hay will, unless the men be excessively careless, go as far as two tons of that which is bad. To slow-work horses, mowburnt hay may be given with less detriment, but it is less unprofitable when consumed by cattle.

Musty Hay is known by its bad colour, its unpleasant smell, and bitter taste. It is soft, and coated with fungi. Like all other hay, its smell is most

* The influenza I mean was not at all similar to a disease which went under the same name at the same time in England. We had almost none of the English influenza till the last week of May, 1837. In the month of June it was very prevalent.

distinct when slightly damp^d by breathing upon it. Old hay is often musty, without having been heated. None but a hungry horse will eat it, and when eaten in considerable quantity it is said to be "bad for the wind." In truth it is bad for every part of the body. In some places they sprinkle this musty hay with a solution of salt, which induces the horse to eat it; but even thus it answers better for bedding than for feeding, and to that purpose the horse applies the most of it.

Weather-beaten Hay is that which has lain in the sward exposed to the rain and the sun. It is musty, full of dust, sapless, bleached or blackened, and destitute of seed. Such, also, is the state of that which has stood too long uncut. All hay should be cut a few days before the seed is quite ripe. After it has lost most of its seed and its juices, little is left to afford nutriment.

Salted Hay, that is, hay with which salt has been mingled at the time of stacking it, is not much used in Scotland. It is not to be had. I can tell nothing about it. Horses are said to prefer it to any other. But the principal motive for salting hay is to preserve it when the weather requires that it be stacked before it is sufficiently dry. Salt prevents or checks fermentation. It darkens the colour of the hay and makes it weigh heavier, for salt attracts moisture. Salt, I think, should not be forced on the horse. It may excite too much thirst. Given apart from the food, he may take all that is good for him. Damaged hay is often sprinkled with salt water, which seems to render it less disgusting, and may possibly correct its bad properties. It should be wetted as wanted, for it soon becomes sodden and rotten.

The Daily Quantity of Hay allowed to each horse must vary with the quality and the work. If the grain be limited, the horse will eat a greater weight :

of poor hay than of that which is more nutritious. If it be damaged, he must consume more than if it were sound, for he rejects some, perhaps a half, and that which he eats does not furnish so much nutriment. When the work is fast, the horse must not have so much as to give him a large belly. Eight pounds of good hay is about the usual allowance to fast-working horses, who may receive from twelve to fifteen or eighteen pounds of grain. Large draught horses will consume from twenty to thirty pounds, but the quantity is seldom limited for these. Much, however, depends upon the allowance of grain. A German agriculturist calculates that eight pounds of meadow hay, or seven of that made from clover, tares, or saintfoin, afford as much nourishment as three pounds of oats. Of the hay raised on poor soils, nine pounds may be required.

A horse can live on hay and water, and when thrown off work for a considerable period, he often receives nothing else. This is not always right. The horse becomes so feeble and so pot-bellied, that it is long ere better food will restore his condition for work. A little grain, some roots, or a bran-mash, though given only once in two days, will help to keep him in flesh. I have heard of the horse being kept almost entirely on hay, receiving grain only when he was to be used. I would recommend the owner to confine himself to bread and water for a week or two, and then try what work a beef-steak will enable him to do. There is a material difference between eating to live and eating to work. The stomach and bowels will hardly hold sufficient hay to keep even an idle horse alive.

The only preparation which hay receives before it is given, is that of cutting it into chaff, into short pieces. When given uncut, the groom does, or should, shake out the dust before he puts it in the rack.

Hay Tea.—An infusion of hay made by pouring boiling water upon it, and covering it up till cool, has been recommended as an excellent nutritious drink for sick horses, and also for those in health. It might perhaps be a very good substitute for gruel; possibly a quart or two of the tea might not be a bad thing for a racer, given between heats, and toward the end of the day, when the horse is beginning to get exhausted from fasting, but it has not been tried.

Hay-Seed.—In Scotland, and wherever the hay is made chiefly from rye-grass, the seed is often made use of in feeding. It is sometimes mixed with the oats to prevent the horse from swallowing them whole, but most generally it is given along with the boiled food, either to divide it or to soak up the liquor. It contains more nutriment than the hay itself, but probably not a great deal, unless the hay has stood too long uncut. Some people say that hay-seed is bad for the wind, but I have never been able to trace any evil to its use. There is always much dust mingled with it, and this should always be removed by washing. Sometimes the seed is boiled, and sometimes merely added to the boiled food while it is hot. I do not know that boiling improves it, but it is much better liked after boiling or masking than in its raw state.

STRAW.

THERE are five kinds of straw used as fodder. Straw, however, is little used here. In many parts of Europe, wheat, barley, or rye straw forms the whole or greater part of the dried herbage, hay being almost unknown. In some of the towns, wheat and oat straw are occasionally given to cart-horses, and in some cases to coaching-horses. In the country, both white and black straw are in common use as winter fodder for the farm-horses. It is very probable

that wheat straw, and perhaps some of the others, may soon be used much more extensively than they are at present. Good straw is certainly better than bad hay, and possibly, by increasing the allowance of grain, and cutting the straw, hay might be almost entirely dispensed with. Though containing much less nutriment, it still contains some, and it serves quite as well as hay to divide the grain and give it a wholesome size. It must be understood that food ought to possess bulk proportioned in some degree to the capacity of the digestive organs. Nutriment can be given in a very concentrated state, yet it is not proper to condense it beyond a certain point. Grain alone will give all the nourishment which any horse can need, but he must also have some fodder to give bulk to the grain, though it need not of necessity yield much nutriment. Straw, therefore, may often be used where hay is used.

But when horses are living chiefly on hay, as many farm-horses do, during part of the winter, it must not be supposed that an equal quantity, or indeed any quantity of straw, will supply the place of that hay. The stomach and bowels will hardly hold hay enough to nourish even an idle horse, and as straw yields less nutriment in proportion to its bulk, enough cannot be eaten to furnish the nutriment required. The deficiency must be made up by roots or grain.

When much straw is used, part or the whole ought to be cut into chaff. It is laborious work to masticate it all, and in time it will tell upon the teeth, which in old horses are often worn to the gums, even by hay and grain.

Barn Chaff.—The shell which is separated from wheat and oats in thrashing is often given to farm-horses. It seems to be very poor stuff. It looks as if it contained no nutriment, yet it may serve to divide the grain, to make the horse masticate it, and

to prevent him from swallowing it too hurriedly. In this way it may so far supply the place of cut fodder. But the barn chaff is usually mingled with the boiled food, and if the article be very soft, the chaff may give them consistence, but it does little more. The coving chaff of beans is said to form a very good manger food.

ROOTS.

POTATOES, carrots and turnips are the roots chiefly used for feeding horses. Parsnips, sugar beet, mangel-wurzel and yams, are occasionally employed.

POTATOES

Are given both raw and boiled; in either state they are much relished by all horses as a change from other food. They are rather laxative than otherwise, and especially when given uncooked. Given raw and in considerable quantity to a horse not accustomed to them, they are almost sure to produce indigestion and colic; when boiled or steamed they are less apt to ferment in the stomach. For horses that do slow, and perhaps not very hard or long continued work, potatoes may, in a great measure, or entirely, supersede grain. They are little used for fast-work horses, yet they may be given, and sometimes they are given, without any harm. On many farms they form, along with straw fodder, the whole of the horse's winter food. In Essex, farm-horses have been kept throughout the winter entirely upon steamed potatoes. Each horse got fifty pounds per day, and did the ordinary work of the farm with the greatest ease. Some salt was mixed with them, and occasionally a little sulphur, which is quite superfluous.

According to Professor Low, fifteen pounds of raw potatoes yield as much nutriment as four and a

half pounds of oats. Von Thaer says, that three bushels are equal to 112 pounds of hay. Curwen, who tried potatoes very extensively in feeding horses, says that an acre goes as far as four acres of hay. He steamed them all, and allowed each horse daily 21lbs. with a tenth of cut straw, which he preferred to hay for this mode of feeding.

The potatoes should be of a good kind, and not frosted. They should always be cooked either by steaming or boiling. They are best when steamed. Horses like them as well raw, but they are excessively flatulent, and this bad property is much corrected by cooking, and by adding some salt. When boiled, the process should be performed with little water, and as quickly as possible. When nearly ready, the water should be altogether withdrawn, and the potatoes allowed to dry, uncovered, on the fire for a few minutes. They should be put on with hot water. They are always over-boiled. Horses prefer them when hard at the heart. There is a general prejudice against the liquor in which potatoes are boiled. It is said to be injurious. In small quantities it certainly produces no apparent evil. I often see it given, not as a drink, but along with potatoes, beans and chaff, which are all boiled together and mixed into a uniform mass, in general too soft. In some places the potatoes are not washed when boiled. If the earth do not relax the bowels, I am not aware that it does any injury, and the horses do not appear to dislike it. When the mass, however, from the addition of chaff, requires much mastication, this sand or earth must wear down the teeth very fast.

TURNIPS

Are in very general use for farm and cart-horses. Of late they have also been used a good deal in the coaching-stables; in many they have superseded the

carrot. The Swedish variety is preferred. Common white and also yellow turnips are almost worthless. According to Von Thaeer, 100 pounds of Swedes are equal in nutriment to 22 of hay. For slow horses, turnips to a certain extent supersede grain, but for fast-workers, they save the hay more than the grain. They have a fine odor when boiled, and this seems to make the horse feed more heartily. They fatten the horse very rapidly, and produce a smooth glossy coat and loose skin.

They are sometimes washed, sliced, and given raw, but in general they are boiled, and occasionally steamed. In the raw state they excite indigestion very readily, and are not much liked. Few horses get them oftener than once a day. They may be given oftener, but the horse soon begins to refuse them. If they are to be used for several successive weeks, they should not be given oftener than once in twenty-four hours, or at most twice, and then not in very large quantities. When the quantity of food is limited, the horse will be glad to get them at all times, but in that case he must have little work. Straw, or hay, and turnips, will make an idle horse fat; they will enable him to do some slow work, but to perform full work the horse will not, or cannot eat enough to keep him in condition: and for fast work he would eat more than he could well carry. Most usually they are given only once a day, and at night after work is over; chaff or hay-seed, and some grain, generally beans, are boiled along with them. They should always be washed. They require much boiling, and when large they may be cut.

CARROTS.

THIS root is held in much esteem. There is none better, nor perhaps so good. When first given it is slightly diuretic and laxative. But as the horse be

comes accustomed to it, these effects are not produced. Carrots also improve the state of the skin. They form a good substitute for grass, and an excellent alterative for horses out of condition. To sick and idle horses they render grain unnecessary. They are beneficial in all chronic diseases of the organs connected with breathing, and have a marked influence upon chronic cough and broken wind. They are serviceable in diseases of the skin. In combination with oats, they restore a worn-out horse much sooner than oats alone.

Carrots are usually given raw. Sometimes they are boiled or steamed, but horses seem to like them better raw. They are washed and sliced. They are often mingled with the grain, but I think they ought to form a separate feed. They diminish the consumption of both hay and grain. Some tell me that six, others that eight pounds of carrots, are equal to four pounds of oats. But the calculation cannot be much depended upon, for the horse may eat more or less hay without the difference being observed. According to Curwen, a work-horse getting from eight to twelve pounds of grain, may have four pounds deducted for every five he receives of carrots. For fast-working horses, carrots never entirely supersede grain. Mention is made, indeed, of an Essex sportsman who gave his hunters each a bushel of carrots daily with a little hay, but no grain; the horses are said to have followed a pack of harriers twice a week, but the possibility of doing this needs further proof. For slow-working horses, carrots may supply the place of grain quite well, at least for those employed on the farm. Burrows, an English agriculturist, gave his farm-horses each seventy pounds of carrots per day, along with chaff and barn-door refuse, with which the carrots were sliced and mixed. He gave a little rack-hay at night, but no grain. He fed his horses in this way from the end of October

to the beginning of June, giving a little less than seventy pounds in the very shortest days, and a little more in the spring. The tops of the carrots have been given to horses, and it is said they were much liked and quite wholesome.

PARSNIPS.

THIS root is used a good deal in France; in the neighbourhood of Brest, parsnips and cabbages are boiled together and given to the horses warm, along with some buckwheat flour. In the island of Jersey the root is much cultivated, and is extensively used for fattening stock, and for the table of all classes. It is said not to be generally given to horses, for it is alleged that their eyes suffer under its use. Arthur Young, however, assures us, that the horses about Morlaix are ordinarily fed upon parsnips, and that they are considered "the best of all foods for a horse, and much exceeding oats." They are eaten both raw and boiled. They are most usually washed, sliced, and mixed with bran or chaff. The leaves, mown while in good condition, are eaten as readily as clover.

Mangel-wurzel, *Yams* and the *Turnip Cabbage*, have each been employed as food for horses, but I have not been able to learn with what effect.

GRAIN.

IN this country the grain consists chiefly of oats, beans and peas, but barley is now in very common use, and wheat is occasionally given. The last two articles, however, are rarely used to the exclusion of oats, but are generally mixed with them in certain proportions. Rye, buckwheat and maize, are used as grain in various parts of the world, but very little or not at all in this.

OATS.

THERE are several varieties which need not be described.

Good Oats are about one year old, plump, short, hard, rattling when poured into the manger, sweet, clean, free from chaff and dust, and weighing about forty pounds per bushel.

New Oats are slightly purgative, indigestible and unprofitable. They seem to resist the action of the stomach, and to retain their nutriment. They make the horse soft; he sweats soon and much at work. If they must be used when under three or four months old, they may be improved by kiln-drying. They are not good, however, till they are about a year old. They may be kept till too old, when they become musty and full of insects. The period at which oats begin to degenerate depends so much upon the manner in which they are harvested and preserved, that the age alone affords no rule for rejecting them. They can be kept in good condition for several years.

Oats are sometimes given in the straw, either cut or uncut. The cost of thrashing is saved, but that is no great gain. It cannot be known how much the horse gets. One may be cheated altogether out of a meal, and another may be surfeited. There is always some waste, for the horse must be getting very little grain if he eat all the straw he gets along with it, and if he get more, some of the grain is left in the straw.

The Daily Allowance of oats is very variable. Hunters and racers receive almost as much as they will eat during the season of work. The quantity for these horses varies from twelve to sixteen or eighteen pounds per day. Stage and mail horses get about the same allowance. Some will not consume

above fourteen pounds; others will manage nearly eighteen. In most stables some other grain is used. For every pound of barley or beans that may be given, rather more than an equal weight is taken off the ordinary allowance of oats. Saddle-horses receive about twelve pounds of oats, cart-horses from ten to fourteen. Those employed on the farm get from four to twelve pounds. The ordinary feeding-measure in Scotland, termed a lippy, holds from three to four pounds of heavy oats.

Substitutes for Oats have been frequently sought. Many experiments have been made to ascertain how far their use might be dispensed with. Roots and bread have both been tried, and the results have shown that horses of moderate work, or even laborious work at a slow pace, can be kept in good condition on carrots or potatoes, with some fodder and no grain. The bread has been made from grain, but it does not seem to have been productive of any economy. Barley, beans, peas and wheat, are partial substitutes for oats. They may form a large portion of the grain; and in Spain barley forms the whole of it. But in this country oats are in general as cheap as any of the other kinds of grain. It has been alleged that oats contain some aromatic, invigorating property, not possessed by other articles; and it does appear that horses fed on roots to the exclusion of grain, are not so gay as grain-fed horses. But whether oats, in equal weight, give the horse more animation than other kinds of grain, is not known with certainty, although common opinion is in their favour.

Gruel is made from oat-meal. It is very useful for sick horses: and after a day of severe exertion, when the horse will not take solid food, gruel is the best thing he can have. Few stablemen are able to make it properly. The meal is never sufficiently incorporated with the water. One gallon of good gruel

may be made from a pound of meal, which should be thrown into cold water, set on the fire and stirred till boiling, and afterward permitted to simmer over a gentle fire till the water is quite thick. It is not gruel at all if the meal subside and leave the water transparent.

WHEAT.

THERE is a general prejudice against wheat as horse-grain, especially in its raw state. It is supposed to be poisonous; and without doubt many horses have been destroyed by it. Horses eat it very greedily, and are almost sure to eat too much, when permitted. Fermentation, colic and death, are the consequences; but these are easily avoided. The grain seems difficult to masticate and also difficult to digest, and colic may be produced more readily by one measure of wheat than by two of oats.

Wheaten Bread, either brown or white, is much relished by nearly all horses. Occasionally it may be given to a horse that has been tired off his appetite, or to an invalid. It should never be less than twenty-four hours' old, and it should be given only in small quantity. Bakers sometimes give their horses a good deal of it; but it ought to be mixed with chaff. Some will not eat it till it is mashed by pouring boiling water over it.

BUCKWHEAT

Is used on the Continent, and the horses are said to thrive on it. Young says that a bushel goes farther than two of oats, and that, mixed with at least four times as much bran, one bushel will be full feed for any horse for a week. The author of the *Farm-er's Calendar* thinks he has seen it produce a stupefying effect; and Bracy Clarke says it appeared to

him to be very laxative. In Holland, and many parts of Germany and Norway, it is made into a black bread, with which the horses are fed.

INDIAN CORN

Is much used as a horse-food in this country, and in various parts of Europe. Cobbett recommended its introduction, and among its other uses, spoke of horse-feeding.

RYE

Is used in Germany, but generally in the shape of bread made from the whole flour and bran; and it is not unusual, in travelling through some parts of that country, and of Holland, to see the postillions help themselves and their horses from the same loaf.*

BEANS

THERE are several varieties of the bean in use as horse-food, but I do not know that one is better than another. The small plump bean is preferred to the large shrivelled kind. Whichever be used, the beans should be old, sweet and sound. New beans are indigestible and flatulent; they produce colic, and founder very readily. They should be at least a year old. Beans are often ill-harvested; and when musty or mouldy, though quite sweet internally, horses do not like them. They are often attacked by an insect which consumes much of the flour, and destroys the vitality of the rest. The ravages of the insect are plain enough. The bean is excavated, light, brittle, and bitter tasted. A few in this state may do no harm; but when the beans are generally infected, it is not likely that they are eaten with im-

* British Husbandry, vol. i., p. 146.

punity, and very often the horse refuses them altogether. Damp, musty, ill-kept beans, though old, are as flatulent as those which are new. All kinds are constipating.

PEAS

Are seldom used without beans, with which they are mixed in large or small quantities. They may be given without either beans or other grain, but much care is necessary to inure the horse to them. Peas seem to be very indigestible, more so than beans, and perhaps as much so as wheat; but when given very sparingly at first, they may be used with perfect safety. It is often said that peas swell so much in the stomach as to burst it. This is an error. Peas do absorb much water, and swell more perhaps than beans, but they never swell so much as to burst the stomach, for the horse cannot or will not eat such a large quantity. When the stomach is burst, it is from fermentation, not from swelling of the peas. All kinds of food will produce the same result when the horse is permitted to gorge himself, or when he is fed in full measure upon food that he has not been accustomed to; but peas seem to be rather more apt to ferment than some other kinds of grain.

LINSEED,

In small quantities, either whole or ground, raw or boiled, is sometimes given to sick horses. It is too nutritious for a fevered horse, but is very useful for a cough, and it makes the skin loose and the coat glossy. Half a pint may be mixed with the usual feed every night. For a cough it should be boiled, and given in a bran mash, to which two or three ounces of coarse sugar may be added.

OIL CAKE,

Ground, and given in the boiled food, when not very rich, consisting chiefly or entirely of roots, is much stronger than bran, and stronger, perhaps, than oat-meal seeds. Two to four pounds per day is the usual allowance. It makes the hair glossy. Horses seem to tire of it soon, but the farmer will find it useful for helping his horses through the winter.

"FRUIT,

As pumpkins, apples, &c., and sweet potatoes in America, figs and chestnuts in Spain and Italy, apples in some parts of France, and numerous other fructified exotics, are occasionally employed as food for horses."* *Horse Chestnuts*, it is said, "would probably form a valuable article of medicinal food for horses. In Turkey the nuts are ground, and mixed with other food; and they are regarded as a remedy for broken wind, and serviceable to horses troubled with coughs."† *Haws*, the fruit of the hawthorn, have been employed by West, of Hampshire, as an article of food for farm-horses, with what profit I have not learned. "The people of Medjid feed their horses regularly on dates. At Deyrach, in the country of the Flasaæ, dates are mixed with the clover. Barley, however, is the most usual food in all parts of Arabia."‡

Mare's Milk.—For the first six months of the young horse's life, his principal food is mare's milk. He begins to eat much sooner, but few are entirely weaned before this time. Farm mares are usually

* Blaine's Vet. Outlines, p. 94. London, 1832.

† Comp. Grazier, p. 529. 1833.

‡ Past and Present State of the English Racers. Hookham, 1836.

put to gentle work two or three weeks after parturition. Her work should be moderate, and her diet substantial. She is often treated as if work could have no influence on her milk. When she has much to do, the milk is neither good nor abundant, and the foal is half-starved. The foal is sometimes permitted to follow his dam to the field, where he may occasionally suckle her. This renders the foal familiar, and at an early age reconciles him to subjection, and prevents engorgement of the udder. Bad weather, or the nature of the mare's work, may forbid the practice. When the mare comes home, the foal is put to suck her. In some places, the milk is previously stripped on to the ground, and the udder bathed with cold water, or vinegar and water. This is not necessary. It is supposed that the milk is injured and pernicious when the mare is overheated; but, in the first place, her work should never be so severe as to overheat her; and, in the second, the milk is not apparently altered when she is. Hard work will diminish the quantity of milk, and render it less nutritious, but it will do no more. If the foal be withheld till the udder be gorged and distended, a little inflammation will take place, and the milk will be bad. In such cases it is proper to draw off a portion before the foal is put to it; and it may also be proper to bathe the udder with cold water. But to empty it or to bathe it merely because the mare has been perspiring, is absurd; and to neglect both mare and foal till the udder needs such treatment, betrays very bad management.

Sometimes a mare, especially with her first foal, will not permit sucking. She requires to be held, to have the udder rubbed with the hand and stripped. Hold her by the head and keep her steady till the foal is satisfied. Do so five or six times a day. On the third day, or thereabouts, she usually begins to perform her duty without interference. In gene

ral the mare is merely restless; she will not stand quiet till the foal suckles her; but sometimes she is ill-natured or vicious. If she strike at the foal, threaten her with the lash, and hold up one of her fore feet. If she continue obstinate and resists the repeated efforts of the foal so long that he is likely to get exhausted, put the twitch on the mare's nose. But, if possible, she must be managed without this, and every time the foal is to suckle her, she must be patiently tried before applying the twitch. It is not good to meddle with the foal by way of assisting or directing him to the udder. He may be very awkward, but he soon learns. It is sufficient to control the mare, and this often requires a great deal of patience and perseverance. After the foal has been permitted to suckle her, she is reconciled to it in a day or two, and may afterward prove a very good nurse. Confinement in a dark loose box sometimes renders her kinder.

Unless the mare be very obstinate, or the foal very weak and awkward, no cow's milk should be given to it. If its hunger be appeased by drink, it will make no attempt to suckle, and it is only by constantly persevering with the mother that she can be brought to her duty.



APPENDIX.

DISEASES, AND THEIR TREATMENT.

A COLD.

THIS is such a common disease, that many people look upon it with indifference ; but *there are few disorders incident to horses, which do not more or less derive their origin from a Cold.* But, as only those who are used to horses, can tell when they have got this disease, it will be necessary to describe the nature of a cold, and the usual symptoms that attend it.

CAUSES OF COLDS. These are various ; but the most usual are, riding the horse till he is hot, and then suffering him to stand still, exposed to the cold air ; removing him from a hot stable to a cold one : (if the horse have been high-fed, and clothed, the cold contracted in this manner often proves very violent ; and this is the reason why horses often catch a severe cold on their first coming out of the dealer's hands :) neglecting to rub him properly down, and to rub the sweat carefully off when he comes in from a journey.

SYMPTOMS. When a horse has caught cold, a cough will follow, and he will be heavy and dull in proportion to the severity of the disease : his eyes will be watery ; the kernels about his ears, and under his jaws, will swell, and a thin mucous gleet will run from his nose. If the cold be violent, the horse will be feverish ; his flanks will heave, and he will refuse his food. The owner should be very careful to observe these last symptoms ; because, when they appear, and are attended with a slimy mouth, cold ears and feet, moist eyes, and a great inward soreness, there is danger of a fever, and generally of a malignant kind. But when the horse coughs strongly, and snorts after it, ears

scalded bran, and drinks warm water, is not much off his stomach, moves briskly in his stall, dungs and stales freely, and without pain, his skin feels kindly, and his coat does not stare, there is no danger, nor any occasion for medicine. You should, however, bleed him, keep him warm, give him some feeds of scalded bran, and let him drink warm water.

THE CURE. If the horse feel hot, and refuse his meat, it will be necessary to bleed him plentifully, and to give the following drink :

2 oz. of Ball of Liquorice,
2 do. Salt of Tartar,
2 drams of Saffron,
2 ounces of Honey.

Cut the ball small, dissolve all together in hot water, and give it nearly cold. This drink may be repeated as occasion requires, but let twenty-four hours elapse first. Or give—

4 oz. of Aniseeds,
2 do. Liquorice Root,
1 do. Gum Scammony
1 do. Nitre.

Boil these together in three pints of water, for ten or twelve minutes; strain the liquor through a cloth; and add two ounces of honey to it when you give it to the horse.

It is a common practice with Farriers to give a drench composed of hot, nauseous powders, in a quantity of ale, but this is a very bad practice, for it heats the blood, and consequently increases the fever; and at the same time the powders pall the horse's stomach by their loathsomeness. The following ball, commonly called *The Cordial Ball*, is the best one yet found out for coughs or colds, either in horse or man, and is much preferable to the horse-balls commonly sold at the druggists' shops, and too often made of bad ingredients. Be careful to get your drugs good, for this ball is of great worth in many disorders, both in racers, hunters, and road-horses. Few things will remove a cough or a cold, or clear a horse's wind, sooner or better. Mr. Markham recommended one something like it, which is called Markham's Ball; but you may depend on it, that mine much exceeds it in value.

Take of Aniseeds Powder, Fenugreek, Liquorice Powder, Elecampane Powder, Flour of Brimstone, each 4 ounces; Grains of Paradise, in fine powder, 6 ounces; 4 ounces of Liquorice, cut small, and dissolved in White Wine; 1 ounce of Saffron, pounded small; 1 ounce of Oil of Aniseeds; 8 ounces of Olive Oil; and 8 ounces of Honey.

Bray them all well together, till they come into paste; and if they should be too dry, add a little more olive oil and honey. The dose is about two ounces, and may be given three or four times a day, if needful. These balls consisting of warm, opening ingredients, are of great use; and given in small quantities, about the size of a pullet's egg, will encourage a free perspiration; but in case of a Fever, they should be given with the greatest caution.

It will be of great use to put scalding-hot bran into the manger, that the horse may hold his head over it, and receive the steam up his nostrils, which will cause a running from them, and relieve him very much. I have known asarabacca, dried and rubbed to powder, and blown up the nostrils, to cause a discharge; for when a horse has caught a violent cold, he is often troubled with a pain in his head, which a good discharge at the nose is very likely to cure. For the same purpose the horse should be warmly clothed, especially about the head, neck and throat, as it has a tendency to promote a running at the nostrils.

By this simple method, with proper care, hot mashes, and warm water, most colds may be cured; and as soon as the horse begins to feed heartily, and snorts after coughing, an hour's exercise every day, will greatly hasten the cure. If the legs swell, and the horse be full of flesh, rowels are necessary.

A COUGH, AND ASTHMA.

CAUSES. The causes are various. Sometimes it is owing to colds imperfectly cured; sometimes to pleurisies, or malignant fevers, which have left a taint upon the lungs or other vessels; sometimes to small eruptions in the glands, which cause the lungs to be much larger than they ought to be, and a quantity of phlegm, and mucilaginous juices, to stuff up the glands and branches of the wind-pipe; and sometimes to fleshy substances engendered in the large

blood-vessels; for all these things hinder a free respiration, and excite a cough.

CURE. If the horse be full of flesh, take from him a moderate quantity of blood. The next day give him scalded bran, and in the evening, the following ball:

- 1 oz. of Powder of Aniseeds,
- 1 do. Liquorice Powder,
- 1 dram of Calomel, 8 drams to an ounce.

Work them into a ball with Barbadoes tar. Give this ball the last thing at night, and be careful to keep the horse out of wet, and from cold water the next day. On the second morning, give the following purge:

- 1 oz. of Barbadoes Aloes,
- 1 do. Castile Soap,
- $\frac{1}{2}$ do. Powdered Ginger,
- 1 dram Oil of Aniseeds.

Bray them together in a mortar, with a little syrup of buckthorn, to make them into a ball, which is to be given in the morning; and plenty of warm water, and walking exercise, till it be wrought off. (It will not work the first day.) In three days after, give six ounces of the cordial ball in a little warm ale, fasting, and to fast two hours after. Repeat the calomel ball, physic, and cordial ball, six days after, in the same manner as before. Let the horse's hay be sweet, and his manger-meat scalded bran, with a spoonful of honey in each feed:—let him have walking exercise in the open air, but be careful of wet and of cold water.

When this course has been pursued two or three times, give two or three ounces of the cordial ball every morning. The above method will remove most coughs, but if it fail, try the following:

- 1 oz. of Gum Ammoniacum, in fine powder,
- $\frac{1}{2}$ do. Gum Galbanum, in powder,
- 2 drams of Saffron, brayed,
- 2 do Assafœtida, in powder.

Work them up with honey, or Barbadoes tar, into one ball; roll it in liquorice powder, and give it fasting, and to fast two hours after. This ball must be given every morning, for six or seven times, before it can have a fair trial; but if the horse be not a good one, it will be thought too expensive. In the cure of this disease, the diet should be very mode-

rate, the usual quantity of hay should be abridged, and sprinkled with water, and the usual allowance of corn and water divided into several portions; for with these regulations in diet, the disease will soon be cured; and where it is incurable, the horse will be so far recovered as to be able to do a great deal of work.

It may not be improper here to add, that some young horses are subject to coughs when cutting their teeth, and their eyes are also affected from the same cause. In these cases, always bleed; and if the cough be obstinate, repeat it, and give warm mashies, which are often sufficient alone to remove the complaint.

When young horses have a cough that is caused by worms, as is often the case, such medicines must be given as are proper to destroy those vermin, of which I shall inform you in the chapter on worms.

THE COLIC, OR GRIPEs.

This disorder is little understood by common Farriers, and has for a long time been a secret to many; so that many a horse has been lost in it, that might have been saved. The same medicines have generally been given to horses in the Colic, as in the dry gripes, when there is much difference in the disorders.

The Colic proceeds from various causes, therefore the method of cure varies; for otherwise the medicines intended to cure it may increase it, and render it fatal. We shall, therefore, divide this disorder into three different species, and endeavor to give such plain directions for managing each, as cannot fail to prove very beneficial. The three species are these:

1. *The Flatulent, or Windy Colic.*
2. *The Bilious, or Inflammatory Colic.*
3. *The Dry Gripes.*

THE FLATULENT, OR WINDY COLIC.

SYMPTOMS. The horse is very restless, lying down, and starting up again. He strikes his belly with his hind-feet, stamps with his fore-feet, and refuses his meat. When the pain is violent, he has convulsive twitches; his eyes are turned up, and his limbs stretched out, as if dying.

and his ears and feet are alternately cold; he falls into profuse sweats, and then into cold damps; often tries to stale, and turns his head frequently to his flanks; he then falls down, rolls about, and often turns on his back. This last symptom proceeds from a stoppage of urine, which generally attends this species of colic, and may be increased by a load of dung pressing on the neck of the bladder.

CAUSES. This disease often proceeds from catching cold by drinking cold water when hot, and the perspirable matter is by that means thrown upon the bowels, which causes them to distend violently, and sometimes brings on an inflammation in the small intestines, when the body begins to swell, and the cure is despaired of.

CURE. The first thing to be done is to empty the straight gut, with a small hand, dipped in oil. This frequently gives room for the wind, before confined in the bowels, to discharge itself; and, by taking off the weight that pressed upon the neck of the bladder, the suppression of urine is removed, upon which the horse immediately stales, and becomes much easier. If the horse be young, and full of blood, it will be proper to take a sufficient quantity of blood from the neck.

When these purgative operations have been performed, the following may be given, as it seldom fails to give relief:

4 oz. of Tincture of Senna, or Daffy's Elixir,
6 drams of Tincture of Opium,
1 dram of Oil of Juniper,
8 oz. of Juniper Berries, bruised.

Put one quart of boiling water on the juniper berries, let them stand a few minutes, strain it off, put all together, and give them to the horse.

If he does not find relief soon after taking this dose, both by staling and breaking wind, it is doubtful whether he will receive any benefit from it; so you must prepare the following clyster for him as soon as you can. Take—Camomile Flowers, 4 ounces; Aniseeds, Fennel, Coriander, 2 ounces of each. Boil them in 1 quart of water, and add 2 oz. of Castile Soap, cut small, while the water is hot, that the soap may dissolve. Give it blood warm.

During the fit, the horse may be walked about, or trotted a little, but should by no means be harassed, or driven about till he is jaded. If no better, give the following:

2 drams of Camphor,
1 dram of Pellitory of Spain,
2 oz. of Ginger Powder,
3 gills of Holland Gin.

If the horse sweat much at times, and then falls into cold sweats, give four ounces of mithridate, in three gills of Holland gin, and repeat the clyster. If the disorder continue three or four hours, give one ounce of tincture of opium, in three gills of Holland gin. When the horse begins to recover, he will lie quiet, without starting and trembling; and if he continue in this quiet state an hour, you may conclude that the danger is over. Dress him down well, and give him a small quantity of warm water, if he will drink it; bed him down well, cover him to keep him warm, and then leave him to get a little rest. You must consider that the disorder has left a soreness on him, both within and without; therefore make him a little gruel, with a pint of red wine in it; and if the skin be knocked off about the eyes, or his huck-bones, rub it with the bottle recommended for bruises

THE BILIOUS, OR INFLAMMATORY COLIC.

SYMPTOMS. This kind of Colic, besides most of the symptoms of the former, is attended with a fever, great heat, panting, and dryness of the mouth. The horse also generally parts with a little loose dung, and a little scalding-hot water; which, when it appears blackish, or reddish, indicates an approaching mortification.

CURE.—Take three ounces of Senna, and one ounce of Salt of Tartar; infuse them in one quart of boiling water nearly an hour; then strain it off, and add two ounces of Lenitive Electuary, and four ounces of Glauber's Salts. Mix them when hot, or they will not dissolve.

If the disorder be not removed by the above medicine, but, on the contrary, the fever and inflammation continue to increase, attended with a discharge of flesh-colored matter, the event will probably be fatal; and the only medicine likely to prevent it, is a strong decoction of jesuit's bark, a pint of which may be given every three hours, mixed with a gill of red port wine; or you may give one ounce of the powder of bark with the wine. Or, if these cannot be got easily, give four ounces of tincture of rhubarb in three

gills of red port wine. Also give a clyster every two hours made of two new-laid eggs, well broken, and two ounces of London or Venice treacle, in one quart of milk. Give it warm. Take—

1 oz. of Rhubarb, in Powder,
 $\frac{1}{2}$ do. Jalap, do.

Work them up into a ball with syrup of buckthorn, and give it to the horse, with warm water to work it off.

THE DRY GRIPES.

SYMPTOMS. This disorder mostly proceeds from costiveness, and is discovered by the horse's frequent and fruitless attempts to dung, the blackness and hardness of the dung, the frequent motion of his tail, the high color of his urine, and his great uneasiness.

CURE. The first thing to be done is to draw out of the fundament, with a small hand, as far as you can reach, and then give the following :

4 oz. of Castor Oil,
 4 do. Tincture of Senna,
 $\frac{1}{2}$ do. Oil of Juniper.

Give them all together, and then the following clyster :

Boil a handful of Marshmallows and Camomile Flowers in a quart of water, then strain it off, and add two ounces of Linseed Oil, or Pale Oil.

If the horse do not mend, repeat both the drink and the clyster. During this disorder, the horse must not have any dry food ; but boiled linseed, and scalded bran, with warm water to drink. Gentle walking exercise is a great means to cause the physic to work ; but be careful of cold.

From the account that I have given of the different species of the Colic, the reader will be abundantly convinced how necessary it is to be acquainted with each, that he may be able to give proper medicines, and to relieve the creature's excruciating pains. He should carefully avoid all hot, violent medicines, which always prove hurtful in every species of this disorder, and frequently fatal. Nor is it any wonder, that horses treated in that manner, should die ; for such medicines stimulate the neck of the bladder, augment the heat of the blood, (before, much too great,) and inflame the bowels, by which a mortification is brought

on, and the horse is lost by the very means used for his recovery.

Sharp fits of the Gravel, are sometimes taken for the Colic; but should this happen, the drink recommended for the Colic, will also be proper for the Gravel.

WORMS AND BOTS.

Much has been said about Worms in horses, and but little understood. I have often been astonished at grooms, farmers, and farriers, not having a better knowledge of them; for there are more horses killed by these nauseous vermin, than by any thing else; and many are kept weakly and low in flesh by them.

SYMPTOMS. The symptoms which indicate worms, are various as the animals are different, and seated in different parts of the body. When the Bots are seated in the straight gut, they are never dangerous, but are often thrust out with the dung. They generally come in the months of May and June, and scarcely ever continue in a horse above a fortnight. But when they breed in the stomach, they often cause convulsions, and even death. The Bots that breed in the stomach, are about the size of a large maggot, composed of circular rings, and have little, sharp, prickly feet along the sides of their bellies, by means of which they fasten themselves to the part from whence they derive their nourishment, to prevent their being loosed from such adhesion before they come to maturity; and as they drain the coats of the stomach like leeches, it is no wonder that they often throw the horse into convulsions, which terminate in death, unless the cause be removed. The violent agonies of the creature are the only indications of their existence. The other kinds of worms are more troublesome than dangerous, and are discovered by the following signs: There is a white fur on the end of the straight gut; the horse is lean and jaded; his coat is rough and staring; and if you rub your hand backward on the hair, a white scurf will rise, as if he had been surfeited; and though he eats with a remarkable appetite, he does not thrive. He often strikes his hind-feet against his belly, and is sometimes griped, but without the violent pains that attend the colic, or stranguary; for he never rolls or tum-

bles, but is uneasy, often laying himself down quietly on his belly for a little while, and then rising and beginning to feed. But the surest symptom is when the horse voids the worms with his dung.

CURE. Many medicines have been given to destroy these vermin, without knowledge or judgment, and even contrary to common reason. Some give coarse sugar for that purpose, but, in my opinion it will rather increase, than destroy them; although a few will fill themselves so full as to loose their hold, and to come away with the dung. I advise all who have horses nearly eaten up with worms, not to give every foolish nostrum that people prescribe, but something that is likely to destroy them. Take—

1 oz. of Socotrine Aloes,
1 dram of Calomel, 8 drams to an oz.,
1 dram of Oil of Aniseed,
2 drams of Powdered Ginger,
 $\frac{1}{2}$ oz. of Syrup of Buckthorn.

Beat all up together in a mortar till the aloes are well broken, and the whole is brought into a paste; which give in the morning, fasting, and to fast one hour after; also give warm water, and walking exercise till wrought off. (It will not work the first day:) Be careful that the horse be open in his body before you give the ball. In grass time, you will have nothing more to do than to give it, and to put the horse where he can get water. This dose is for a pretty strong horse, so you must add or diminish, according to size. This dose must be repeated as need requires, but not within seven days. It will destroy most kinds of worms; but the hard, round worms require different treatment, as they are the worst of any to get rid of. To destroy them, give the following:

1 dram of Calomel, 8 drams to an oz.,
6 drams of Jalap,
6 drams of Rhubarb, in powder.

Wrought up into a paste with conserve of hips, and two days after, give the above ball. Or the following:

1 dram of Calomel, 8 drams to an oz.,
1 oz. of dried Foxglove Leaves, powdered,
 $\frac{1}{2}$ oz. of Worm Seed, powdered,
1 oz. of Jalap, in powder.

To be given in three gills of malt liquor from the mash-together, you may be sure that most of the vermin will be tub. If the above be given every week for three weeks expelled. If the medicines be given in the house, let the food be light and opening, and warm water for two days, with walking exercise.

I advise all who have horses troubled with worms, to give savin, dried and powdered, before they give the worm physic. If one ounce a day be given for a week before, in a mash of bran, it will be much better. The above ball is good for many disorders besides worms.

THE STAGGERS.

This disease is a grievous one indeed. Farriers generally divide it into two heads—the Heart Staggers, and the Head Staggers; but they are both one. It is caused by the liver making blood so fast, that the cavity of the heart is overloaded, and the blood flies up the neck vein till the head is overloaded too; and if relief cannot be obtained, the horse soon dies.

SYMPTOMS. The most common are drowsiness, watery, and somewhat full and inflamed eyes, a disposition to reel, feebleness, a bad appetite, the head generally hanging down, or resting on the manger. There is little or no fever, and the dung and urine are very little altered. The horse soon begins to reel, and falls down, and sometimes is so outrageous as to bite every thing in his way.

CURE. In the first place, bleed him as well as you possibly can, by striking the veins in several places at once, and taking away four or five quarts at one time; and, in order to raise up his head and shoulders, support them with plenty of straw. If he survive the first fit, cut several rowels, give him clysters at night and morning, made of barley-water and a little sweet oil and salt; and blow up his nostrils a little Cayenne pepper, or white hellebore. Also give him—

4 drams of Bark,
16 grains of Turbeth Mineral,
 $\frac{1}{2}$ oz. of Camphor.

Give it in a little warm ale. If the horse be outrageous, give him—

1 oz. of Tincture of Opium,
 1 gill of Syrup of Poppies,
 1 oz. of Tincture Guaiacum

Be careful not to let him knock his head, for it will increase the disorder. If he get through the first fit, give him two ounces of crocus metallorum every day, to thin his blood, for fear of a relapse. It will be proper to give him the following ball once a month, for some time after :

1 oz of Rhubarb, in powder,
 $\frac{1}{2}$ do of Jalap,
 1 dram of Calomel, 8 drams to the oz.

To be made into a ball with syrup of buckthorn. This ball will be of great use in thinning the blood, and preventing a return of the disorder ; for when a horse has had one fit of it, he is very likely to have another, if care be not taken to prevent it.

A COMPOUND FEVER.

SYMPTOMS. The symptoms of this disease are—a slow fever, with great depression ; and sometimes inward heat and outward cold, and at other times heat all over, but not excessive. The horse's eyes are moist and languid ; his mouth is continually moist, so that he is not desirous of drinking, and when he does drink, a very little satisfies him ; he eats very little, and moves his joints in a loose, feeble manner, grating his teeth very disagreeably ; his body is generally open, his dung soft and moist, and he stales irregularly, sometimes making little water, and at others a large quantity, which is of a pale color, and has very little sediment.

CURE. In the first place, take from the horse a moderate quantity of blood. Let it not exceed three pints, but repeat the operation according to its strength, if there be any tendency to inflammation ; after this, the nitre drink already described may be given, with the following addition :

1 oz. of Snake Root,
 3 drams of Saffron,
 3 drams of Camphor, dissolved in Spirits of Wine.

The horse's diet should be scalded bran ; and linseed, boiled, and wrought up with bran. - Also give him the best

hay by a handful at a time. It is often necessary to feed him by the hand, for sometimes he is not able to lift his head to the rack.

In this disease, drinking is absolutely necessary to thin the blood; and therefore, if the horse refuse warm water, he should be indulged with such only as has had the cold taken off. This may be done with a hot iron, or by letting it stand in the pail in a warm stable; and this will be better than forcing warm water on the horse's stomach. If this method do not prove sufficient, but the fever shall continue to increase, the following balls should be given immediately, as the danger augments every hour.

1 oz. of Camphor,
 $\frac{1}{2}$ do. Gum Myrrh,
 1 do. Squills,
 2 drams of Castor.

Make them up into two balls, and give one at night, and the other in the morning. If no better in a short time, give the following infusion:

1 oz. of Snake Root,
 2 do. Gentian Root,
 2 do. Lemon Peel,
 2 drams of Saffron.

Boil these well together in three quarts of water, and give a pint once a day. If the above ball fail of success, give the following:

1 oz. of Camphor, dissolved in Spirits of Wine,
 1 do. Sal Ammoniac,
 1 pint of good Vinegar.

Put them all together, and stir them about till the fume subside. This is for two doses, to be taken at twelve hours' distance, diluted with water. There is not perhaps a more powerful and effectual medicine known than camphor in all kinds of putrid fevers, it being active, attenuating, and particularly calculated to promote urine and perspiration, the two principal outlets by which relief is to be obtained; and if this medicine were more often given than it is, it would be a greater credit to the farrier, and give greater relief to the horse.

If the horse be costive, clysters, or an opening drink, should be given; and should he purge moderately, be care-

ful not to suppress it; but if it continue so long as to enfeeble the horse, give him a little red port wine and bark.

Also observe to let the animal drink plentifully, for that will greatly promote the operation of the above-named medicines, as both the disorder and the medicines will cause a thirst. If the horse can bear walking about, a little open air will be very proper, but be careful to keep him well covered.

Particular regard should also be paid to his staling, which, if it flow in too great quantities, must be repressed by proper astringents, and by giving him lime-water; and, on the other hand, if he stale so little as to occasion a fulness or swelling in his body and legs, give him the following drink.

1 oz. of Nitre,
2 do. Castile Soap,
1 do. Venice Turpentine,
2 drams of oil of Juniper.

Make them into a ball with liquorice powder, and give them at twice twenty-four hours' distance. These balls may be given as occasions may require, and are very proper to convey off the greasy, slimy matter from the passage of the urine, and to settle swelled legs.

These are the best methods of management, and will generally prove successful; but sometimes art will fail, and the horse will discharge a greenish or a reddish gleet from his nostrils, and sneeze very frequently; he will continue to lose his flesh, become hide-bound, refuse his meat, swell about his joints, and his eyes will appear fixed and dead; a purging also ensues, and a dark-colored foetid matter is discharged. When these symptoms appear, the case may be considered desperate, and all attempts to save the horse will be fruitless.

In this disorder you must take care not to let the horse eat too much, for his diet should be light, and in small quantities at once, and increased gradually as he may gain strength. When his skin feels kind, his ears and feet continue moderately warm, his eyes look lively, his nose remains clean and dry, his appetite mends, he lies down with ease, and dungs and stales well, you may conclude that the danger is nearly over, and that nothing more is needful but care to complete the cure. On the contrary, by overfeeding you will run the risk of bringing on a bad surfeit, and

the horse may be, according to the old saying,—*killed with keeping*.

A BROKEN WIND.

This disorder may sometimes be prevented, but cannot be cured; and it has hitherto been as little understood as any to which a horse is subject.

SYMPTOMS. The first symptom of a Broken Wind is an obstinate dry cough, which is neither attended with sickness nor loss of appetite; but, on the contrary, with a disposition to foul feeding, eating the litter, and drinking large quantities of water.

PREVENTION. When a horse is troubled with an obstinate dry cough, and eats his litter, it will be necessary to bleed him, and to give him the mercurial physic already prescribed, repeating it two or three times. Afterwards give the following balls for some time, which have been found of very great service.

4 oz. of Gum Ammoniacum,
4 do. Galbanum,
4 do. Assafoetida,
4 do. Squills,
 $\frac{1}{2}$ do. Saffron,
6 drams of Ciunabar of Antimony

Make the whole up into balls with honey and a little liquorice powder, and give one about the size of a pullet's egg every other morning. This is a very good ball for a dry cough.

Some horse-dealers give broken-winded horses a quantity of shot when they carry them into the market for sale, and I suppose it is to draw the bowels from the midriff, so that the disorder may not be discoverable; but at the same time there is great danger of killing the horse.

But it is not enough to give proper medicines; the horse's diet should also be carefully attended to at the same time, if we would hope for success. In order to do this, the horse should eat very sparingly of hay, which, as well as his corn, should be wetted with chamber-lie, which is much better than water; and in this disease the horse is always craving after water. Chamber-lie is best for this purpose, because of the volatile salts which it contains, as

they are a means of removing the thirst. For the same reason, garlic is very efficacious in this disorder. Two or three cloves being given in each feed; or three ounces bruised, and boiled in a quart of milk and water, and given every morning for a fortnight, has been found very serviceable. So easy a remedy should never be neglected; for by warming and stimulating the solids, and at the same time dissolving the tenacious juices which choke up the vessels of the lungs, it greatly relieves this complaint.

Moderate exercise should never be omitted; and although broken-winded horses are not able to endure much labor the first summer, yet many have been found less oppressed the second, and scarcely perceptibly affected the third, being then able to perform a long journey, and to endure great fatigue. A horse kept constantly in the field, when not in work, will be able to do good service for many years.

It may not be improper to observe that those who hope to cure a broken-winded horse, or even one that is troubled with an obstinate cough, by putting him to grass, will find themselves wretchedly mistaken; for on his being taken into the stable and fed with dry meat, he will be much worse than before; and some that had only a dry cough when they were put to grass, have returned broken-winded. Therefore always remember, that if you cannot keep a horse of this description constantly abroad, it is best not to put him to grass at all, as, instead of curing, it will tend to augment the disorder.

In short, the grand secret of managing horses of this kind, consists in having particular regard to their diet and exercise. A moderate quantity of hay or corn, and water, should be given at a time, and the former constantly moistened, to prevent their wanting too much of the latter. They should have moderate exercise, but never any that is violent. By this method, and giving the following ball once every fortnight or three weeks, the horse will be able to do good service for many years.

6 drams of Socotrine Aloes,
2 do. Myrrh,
2 do. Galbanum,
2 do. Ammoniacum,
2 oz. of Bayberries, in powder.

Make the whole into a ball with a little oil of amber, and

a sufficient quantity of syrup of buckthorn. This ball operates so gently that there is no need for confinement, except a little the day following that on which it is given. The horse must have warm mashes and warm water, and the utmost care must be taken to prevent his catching cold.

THE HIDEBOUND.

This disorder is too often brought on by the horse being worked too hard, and badly kept; although this is not always the case. When the skin of a horse sticks so close to his ribs that it appears immovable, the horse is said to be hidebound. But this is not properly a disease, but rather a symptom, being often caused by previous disorders, such as fevers, convulsions, surfeits, worms, or disorders of the kidneys or lungs.

CURE. As the Hidebound may proceed from various causes, it is necessary to determine the cause, before such medicines can be applied as will remove it.

If it owe its origin to hard labor and want of food, rest and plenty will soon remove it. If it is caused by worms, worm medicines must be applied; or if it be left by any imperfectly-cured disorder, the following drink must be given:

2 oz. of Aniseeds, in powder,
 2 do. Ginger, in powder,
 1 do. Grains of Paradise,
 2 do. Mustard,
 2 do. Turmeric.

All to be powdered, and to be given in warm ale, fasting, and to fast two hours after. Give warm water two or three times. Bleeding, tapping, and physic are also necessary, when the Hidebound is left by any disorder.

THE FARCY, OR FARCIN.

SYMPTOMS. At the beginning of this disorder a few small knobs, or tumors, resembling grapes, are found on the veins, which are so painful to the touch that the creature shows evident marks of uneasiness on their being pressed with the finger. They are at first very hard, like unripe grapes, but in a very little time they grow soft, and break and discharge a bloody matter, and become very foul and untoward ulcers. This disease appears in different

places in different horses. Some show it first on the head; some on the external jugular vein; some on the plate vein, extending from thence downward, on the inside of the fore-leg, towards the knee, or upwards towards the brisket. In some it first appears about the pasterns, or the sides of the large veins, and on the insides of the thighs, extending towards the groin; in others on the flanks, spreading by degrees towards the lower belly; and some horses are nearly covered all over the body at once.

CURE. When the Farcy attacks only one part of a horse, and that where the blood-vessels are small, it may be easily cured; but when the plate vein is affected, and turns corded; and especially when the crural veins, within-side the thigh, are in that condition, the cure is very difficult, and the creature is rarely fit for any thing but the lowest work after it. Therefore those who depend upon some particular medicine, and flatter themselves with being able to cure every species of the Farcy with it, will find themselves wretchedly mistaken; for different medicines are needful, according as the disease is superficial or inveterate. The former is easily cured, for sometimes moderate exercise is sufficient; but the latter requires knowledge and experience; and sometimes baffles the most skilful, and defies the whole power of medicine.

From the above description of this disease, it appears that it is of the inflammatory kind, and that the blood-vessels are affected. Copious bleedings are therefore absolutely necessary, especially if the horse be fat and full of blood. This evacuation always checks the progress of the Farcy in its beginning, but its good effects soon vanish, especially if the horse be low in flesh. After bleeding, mix the following:

4 oz. of Cream of Tartar,
 4 do. Liver of Artimony,
 4 do. Lenitive Electuary,
 4 do. Castile Soap,
 2 drams of Calomel, 8 drams to an ounce.

Make these into balls, and give two ounces a day for some time. While giving these balls, dissolve a little nitre in the water given to the horse to drink. These medicines will keep his body open, and allay the inflammatory heat of his blood, which is the principal cause of the disease; and

while they are given inwardly to remove the cause, let the tumors be rubbed twice a day with the following ointment :

4 oz. of Elder Ointment,
4 do. Flanders Oil of Bays,
2 do. White Vitriol,
1 do. Red Precipitate,
2 do. Sugar of Lead.

Beat all well together into an ointment, and keep it for use. This ointment will soon disperse the tumors, which will leave small bald spots on the skin, but the hair will grow again in time. If the tumors break, and run a thick, well-digested matter, it is a sign that the disease is conquered, and the horse will soon be well ; but it will be necessary to give him two ounces of liver of antimony every day for a fortnight after, in order to sweeten his blood, and disperse the small bunches that remain.

This method will never fail, when the small veins only are affected ; and a short time will complete the cure.

But when the Farcy affects the large blood-vessels, the cure is far more difficult. Let the practitioner always attempt it at the beginning of the disease, as he then will have fewer difficulties to encounter ; for delay renders that almost impossible to be overcome which at first might have been easily conquered. Therefore, when the plate, or crural veins are corded, lose no time, but bleed immediately on the opposite side, and apply to the distempered vein the following mixture, which is proper to dress the wounds with, but not before they are broken out.

1 dram of Corrosive Sublimate,
1 oz. of Spirits of Salt.

Powder the sublimate, and put it into a bottle, and put the spirits of salt upon it to dissolve it ; then add two ounces of vinegar, by degrees. This is a very proper mixture to dress the ulcers with ; but if it cannot be easily got, take—

6 oz. of Oil of Turpentine,
3 do. of Oil of Vitriol.

Put the pot in water with the turpentine in it, and pour the oil of Vitriol in, a little at a time, and keep stirring it till it shall have subsided. If the Farcy be situate in the loose and fleshy parts, such as the flanks and the belly, the

mixture should consist of equal parts of oil of turpentine and oil of vitriol; but when the seat of the disease is in the parts which are less fleshy, the proportions above are best calculated to perform a cure. The medicine must be used in the following manner. Rub the parts affected, with a woollen cloth, and then apply some of the compound oil to every bud and tumor. Continue this method twice a day, and at the same time, give cooling physic every other day. The balls and nitrous draughts, before mentioned, will answer the intention. By this treatment, the tumors will be digested, and the cords dissolved; but it will be necessary to give liver of antimony to complete the cure, and to prevent a relapse; and also to dress the sores, when well digested, with a mixture of beeswax and oil, which will heal them and smooth the skin.

Sometimes the disease will not yield to this treatment, especially when situate near the flanks or the lower belly. In that case it will be necessary to bathe the parts with the compound oil, as far as the centre of the belly; at the same time to give a course of antimonial medicines.

The following composition is stronger than the last, and on that account is often used when the disease is obstinate.

4 oz. of Spirits of Wine,
2 do. Oil of Turpentine,
4 do. Oil of Vitriol,
2 do. Vinegar.

Mix all together, with the caution before directed. When this method fails, and the disorder becomes inveterate, try the following, which is recommended by an eminent practitioner.

$\frac{1}{2}$ pint of Linseed Oil,
3 oz. of Oil of Turpentine,
3 do Oil of Peter,
2 do. Oil of Bays,
 $\frac{1}{2}$ do. Oil of Origanum,
 $\frac{1}{2}$ do. Strong Aquafortis,
2 do. Barbadoes Tar,
2 drams of Tincture of Euphorbium.

Mix all together with caution, as before directed. This medicine must be rubbed on the tumors and corded veins once in two or three days, observing that if the mouths of the ulcers are choked up, or so thick as to confine the mat

ter, to open a passage with a small hot iron; and also to destroy the proud flesh, which may be kept down by touching it occasionally with oil of vitriol, aquafortis, or butter of antimony.

In this disorder, these are the best ways of proceeding that have yet been discovered; but it is to be considered as an obstinate one, and is sometimes very bad to cure. It has hitherto baffled many an able practitioner, and it is to be feared will baffle many more; for when the blood has got into such a corrupted state, it bids defiance to medicines.

The ingenious Dr. Brackden recommends the strong mercurial ointment, for rubbing the cords and tumors with before they break; and in order to disperse them when they are broken, to dress the sores with a mixture composed of equal parts of Venice turpentine and quicksilver. If the mouth become sore by this means, a gentle purge should be given to prevent salivation. This is doubtless a very good method, and if care be taken, will often prove effectual.

A SPRAIN IN THE SHOULDER.

When the shoulder of a horse is sprained, he does not put out that leg like the other, but in order to ease it, sets the sound foot firmly on the ground. When trotted in hand, he performs a kind of circle with his lame leg, instead of putting it forward; and when he stands in the stable, that leg is advanced before the other.

There is what is called a Shoulder-slip, which is worse than a Sprain. When this happens, the horse can neither lift his leg nor put it forwards. You may know this from the shoulder-blade standing higher than the other; but to discern that, you must make him stand on the lame leg, for the leg he stands on will always appear a little higher than the other. The flesh will also shortly waste away from the shoulder-blade, which is a sure sign of a Shoulder-slip. When this accident has taken place, put a tap into the lame side of the animal's breast, and blow the shoulder full of wind with a pipe. When you have rinded the skin to put the tap in, hold the skin fast to the pipe, and blow the part that you have rinded, full, and let some one draw the wind up into the shoulder with the edge of his hand, as far as

the shoulder-blade, and then put in the tap, or rowel, and stop the hole up well with tow and salve. Give warm water for three days, and then open the place, stir the tap round, and rub the shoulder all over with the following liniment :

2 oz. of Spirits of Wine,
2 do. Sweet Oil,
2 do. Spirits of Sal Ammoniac.

Shake them well together, rub the shoulder well with the mixture every third day for some time, and if the horse do not get better with three or four times rubbing, use the following:

2 oz. of Oil of Turpentine,
1 do. Oil of Origanum,
1 do. Oil of Bricks.

Shake these up together, rub all on at a time, and walk the horse about a little, afterwards. When near the sea, swimming in the salt water is very proper, and I have known swimming in fresh water to be of great use.

A Sprain in the shoulder point, requires nearly the same treatment as a slip, but you need not blow it. When it is attended by inflammation, cooling mixtures, such as extract of lead and water, must be used. But when a swelling, or an inflammation takes place, it is mostly caused by a hurt, or by a stroke from another horse. If there be no swelling, rub the shoulder point well with the following mixture, every third day.

1 oz. of Oil of Peter,
1 do. Oil of Amber,
1 do. Oil of Spike,
1 do. Oil of Bricks

Shake these well together, and rub the shoulder point every other day. If the horse ye not better, take—

1 oz. of Oil of Turpentine
1 do. Oil of Origanum,
1 do. Oil of Swallows,
1 do. Oil of Amber.

Shake these together, and rub the shoulder point well with them every third day; and if the horse continue lame, recourse must be had to blistering.

THE BONE-SPAVIN.

Although this is a common disorder among horses, yet it is little understood by either breeders or farriers. The Bone-Spavin is a bony excrescence, or hard swelling on the inside of the hock in a horse's leg, and sometimes owes its origin to kicks and blows, and sometimes to natural causes ; but in the former case it is much more easily cured than in the latter ; and those that grow spontaneously on colts, or young horses, are not so bad as those that appear in horses that have arrived at their full strength and maturity. In old horses, they are generally incurable.

Our horse-dealers and jobbers make a second kind of Bone-Spavin, which they call a Jack, but this is only a polished name for a Bone-Spavin, as there is no difference between the two. Some call it a Dry Knot, but still it is a Bone-Spavin.

Sometimes the horse is very lame when the Spavin is first coming out, and when it has come out, is better for some time, and then grows lamer as the bone hardens. I would advise you to apply a blister as soon as you have any suspicion that a horse is likely to put out a Spavin, and to continue blistering every fortnight, for some time ; by which means you may stop a Spavin in a young horse.

CURE. Mild medicines should be used if the horse is young, as they will in a short time wear the tumor down by degrees, which is much better than trying to remove it at once by severer methods, which often have a very bad effect, and produce worse consequences than those they were intended to remove. But in full-grown horses they are absolutely necessary, and accordingly, various authors have given prescriptions for compounding medicines to answer the intention ; but I will not enumerate them here, as the blistering ointment given in the last chapter, will be found to answer better for young horses than anything yet found out ; and for an old horse, or one that has come to his full strength, you may add a dram of sublimate, finely powdered, to two ounces of the blistering ointment, and stir it well up.

Before these are applied, the hair must be cut off very close, and then the ointment laid on very thick on the affected part. It is proper to make the application in the morn-

ing, and to keep the horse tied up to the rack all day without any litter; but at night he must be littered, in order that he may lie down; and to prevent the blister from coming off, put a white pitch plaster over it, and tie it on with broad tape.

When the blister has done running, and the scabs begin to dry and peel off, it should be applied a second time in the same manner as before, and the second will have a much greater effect than the first.

When the Spavin has continued long, the blister will have to be often renewed, perhaps five or six times; but it is necessary to observe, that after the second time, you must not be less than three weeks before you lay on the third, or you will destroy the roots of the hair, and leave the place bald. By these means, Bone-Spavins may often be cured; but when they fail, recourse must be had to firing.

Before you fire a horse for the Bone-Spavin, be careful to take the vein out of the way, for it generally lies over the Spavin; and you cannot fire deep enough to come at the callous substance, without its removal. In order to destroy the vein, cut a nick through the skin upon it, just below the Spavin, and another just above it, and put a crooked needle under the vein, and tie both ends: then cut the vein across between the tyings, both above and below, and you may either draw the piece of the vein out, or leave it in.

Let the iron you fire with be pretty sharp; cut four or five nicks upon the bone, and let the iron take hold of the superfluous bone, in order that it may waste away by mattering; and when you have done, lay on some white pitch, pretty hot, and put a cloth around it to keep it on. In three days, open the place, and dress it with yellow basilicon.

Some people put lunar caustic, or sublimate, into the places; but it is a dangerous practice, and often lames the horse forever. I wish those who have got a horse with a Bone-Spavin, to make a full trial of the directions here given, and I trust they will find them to answer the purpose, as well as any hitherto found out.

THE BLOOD-SPAVIN, OR BOG-SPAVIN.

Many farriers and horse-dealers divide this disease into two heads, and give them different names ; but to my certain knowledge, they are both one, for I have proved it many ways. A Blood-Spavin does not come by breeding from spavined mares, nor by being got by spavined horses, as the Bone-Spavin does ; but you may safely breed out of a Blood-Spavined mare, or have foals got by a Blood-Spavined horse.

In my opinion, Blood-Spavins are generally brought on either by Sprains, or hard labor when the horse is young, and sometimes when he is full-grown.

The Blood-Spavin, or Bog-Spavin, is a dilation of the vein that runs along the inside of the hock, and forms a small soft swelling in the hollow part, which in time renders the creature lame, but seldom till the gelatinous matter becomes ropy, like melted glue in a bag, and is situate on the inside of the hough. Sometimes it goes through to the back part of the joint, and then it is called a thorough-pin.

CURE. Soon as you discover the vein puffed up, or forming a bag, lay on some blistering ointment, and in four days after, bathe the swelling well with hot vinegar, with a little saltpetre dissolved in it. Also put a bandage round it to disperse the swelling as much as you can. If this method do not succeed, you must make two incisions in the skin lengthwise, as the vein runs, one just above, and the other just below the joint, and lay the vein bare ; then put the end of a buck's horn under it, raise it up, and fasten it in both places with waxed thread ; then cut the vein in two at both places, within the tyings, and if you think proper, draw the vein out. This method of proceeding will cure most Bog-Spavins at the beginning. Spring, or the back end of the year, is the most proper time for this operation ; but the latter is preferable, as you can then let the horse run out most of winter, which will be of great service to him.

If the above method fail of a cure, you may make an incision into the bag with a knife, and let out the gelatinous matter, and then dress the wound with a digestive ointment till the bag be destroyed. But this is a dangerous method,

and although it may answer in some cases, it will not in others. Should the joint run a joint-lee, the cure is not to be depended on. In old horses, nothing can be done that will be of service.

A CORB.

This is a soft swelling that rises out of the joint on the back part of the hind-leg, just below the hock, and mostly lames the horse, besides being unpleasant to the eye. To cure it, strike a few holes into it with a pricker, made so as just to go through the skin; then rub well with oil of origanum, and blister as often as needful.

A RING-BONE.

This is so well known that I need not describe it, but only point out the remedy; yet I must observe, that a Sprain in the Coffin is sometimes taken for a Ring-Bone, when it causes a rim to rise just above the foot. Ring-Bones come out from the pastern, between the fetlock and the foot; but if the pastern is long, they are nearer the foot.

They will generally yield to the same method of cure as a Corb, especially if just coming out; but if not, recourse must be had to firing.

Splents, Osselets, or any other bony or fleshy substances on the legs, may be cured in the same manner. A Splent on the shank-bone is only a grievance to the eye, and will go away of itself when the horse comes to age; but the sooner those that are near the knees or the tendons are removed, the better.

MALLENDERS AND SALLENDERS.

The first is on the fore-leg, at the bend of the knee, and the last on the hind-leg, at the bend of the hough. They crack and throw out a thin brown matter, and sometimes a hard scurf, or scab, which prevents the horse from bending the limbs which are affected, as he should do.

CURE. They both proceed from the same cause, and consequently require the same treatment; which consists in washing the parts with old chamberlie or a warm lather

of soap-suds, and afterwards applying strong mercurial ointment, spread on tow, to the cracks, once a day till the scabs fall off, when the cure will be completed; and then it will be necessary to give him a dose of physic. If the disorder will not yield to the mercurial ointment, make a strong mixture of vitriol water, and wash the cracks with it, and it will dry them up, and cause the scabs to fall off.

THE STRANGLES.

Most horses have this disorder while young, but at seven years old they are out of danger. There are two kinds of this disorder. The common kind is a swelling under, or between the jaw-bones. The other, which is called the bastard kind, is much the worst. Sometimes swellings appear on the buttocks, break, and discharge matter for a few days, and then dry up, after which, others appear in a fresh place in the same manner. I have known horses that have had this complaint eight or ten weeks.

The common kind begins with a swelling between the jaw-bones, which sometimes extends to the muscles of the tongue, and is often attended with so much heat, pain and inflammation, that before the matter is formed the creature swallows with the utmost difficulty.

SYMPTOMS. The Strangles is attended with great heat and fever, a painful cough, and great inclination to drink, without being able. Some horses lose their appetites entirely, and others eat but very little, occasioned by the pain resulting from the motion of the jaws in chewing and swallowing. When the horse runs much at the nose, it is not a good sign.

Although this disease is very troublesome, it is not dangerous, except when the swelling turns upwards against the wind-pipe and gullet, and then there is danger of suffocation if it do not break soon.

CURE. The Strangles is not properly a disease, but a discharge common to young horses, and therefore it follows that the discharge must be promoted, in order to throw off the offensive matter. The best method of doing this is, to keep the swelling always soft by soaking it with softening ointment, such as marshmallows, or elder ointment. I have known oil of swallows, with a little spirits of harts-

horn in it, be very useful in bringing the swelling forward, and causing it to break. A cloth in the form of a cap, put on the horse's head, and stuffed with wool to keep the swelling warm, will be of great service. Some people apply a poultice, but there is no need of this if the above be properly used. Give plenty of warm water, with a little meal in it; for in this disorder a horse cannot swallow dry meat enough for its support.

Sometimes the Strangles gather four or five times, and break in many places; and you must observe that if the orifices are not wide enough, they must be opened with the point of a knife, and by this means it will be prevented from breaking out in so many places. After the swelling appears, it will be five or six days before it breaks and discharges. There is always a small discharge at the nostrils, but it is little or no grievance to the horse.

When the swelling is broken, and the orifice of a proper size to discharge the matter, dress with the following ointment spread on tow:

Take Yellow Rosin and Burgundy Pitch, of each one pound; Honey and common Turpentine, of each half a pound; Bees Wax, four ounces; Hog's Lard, one pound and a half; and of Verdigrise, finely powdered, one ounce. Melt the ingredients together, but do not put the Verdigrise in till nearly cold, and keep stirring all the time till cold, or the Verdigrise will fall to the bottom.

This is one of the best salves for wounds that has been found out, and especially for old ones.

The Bastard Strangles requires the same kind of treatment, but it is proper to give the horse a dose or two of calomel physic also.

THE GLANDERS.

This disease has baffled all who have tried to cure it, and probably will do so to the end of time; so I advise those who may have a glandered horse, to put him off as soon as they shall be certain that he is so. People often mistake other disorders for the Glanders. A violent cold sometimes causes a running at the nostrils, and kernels under the jaws, when the horse is free from the Glanders. Sometimes a running at the nostrils is caused by laying too much

weight on the horse. I once bought one at Boroughbridge fair, which I soon after sold, and eleven weeks after, had him returned as a glandered horse; but I kept him for some time afterwards, and he neither infected others, nor lost his flesh. This horse was bought from a miller, who had overloaded him, which caused him to bleed at the nose; afterwards he began to run at the nose, and did so during the time that I had him, which was nearly half a year. I do not pretend to *cure* this disorder.

SYMPTOMS. The matter discharged from the nostrils of a glandered horse, is either white, yellow, greenish, or streaked or tinged with blood. When the disease has been of long standing, and the bones are fouled, the matter turns blackish, and becomes very bad.

The Glanders is always attended with a swelling of the kernels, or glands under the jaws, but in every other respect, the horse is generally healthy and sound, till the disorder has continued some time, and the morbid matter has affected other parts.

If a thin, limpid fluid be first discharged, and afterwards a whitish matter—if the gland under the jaw do not continue to swell, and the disorder shall have been recently contracted, a speedy cure may be effected by applying the following:

1 oz. of Roach Alum,
1 do. White Vitriol.

Powder these well, put them into a pint of warm vinegar, and syringe about an ounce up his nostrils every day. This may do good if the disorder be newly caught.

SCRATCHES.

This disease is the forerunner of the Grease, and is a hot oozing matter that breaks out like kins, with a nauseous smell. It is very troublesome to a horse, causing his heels to look red and angry, and to be very sore; and sometimes it is so violent as to render a horse lame, and unfit for use.

If you do not bleed and physic as soon as you find a heat in a horse's heels, you may soon have him laid up with the Grease. Sometimes in slight touches of this complaint, the heels are not hotter than usual. In that case, take a little flour of sulphur, and spirits of wine, mix

them together into an ointment, and fill the cracks well with it. When the disorder is too hot to be healed by this ointment, rub with a little *Ægyptiacum* ointment, but be careful not to lay too much on, for it is a great drier.

Rat-tails at first resemble the Grease, and are attended with a hot, scorbutic humor at the beginning, and often by neglect, destroy the roots of the hair, and then there is no complete cure for them; but they may be relieved by rubbing with equal parts of strong mercurial ointment and Flanders oil of bays.

If a horse have got the Scurvy, or Scabs on his legs, this ointment will mostly take them off; but if not, mix well with hog's lard, one dram of sublimate, in fine powder. These two last mixtures will cure most Scabs, and mixed together, they will cure the Itch.

WINDGALLS.

These are mostly on the hind-legs, near the fetlock, but I have known them above the fetlock, and on the arm. Windgalls are not only eye-sores, but lame many a horse. Many methods are tried to disperse them without effect. If you put your finger on one side, and your thumb on the other, and press with one of them, you will find the Windgall to go quite through the leg. The reason that they are mostly on the hind-legs is, because the horse stands lower behind than before, and throws most weight on the hind-legs.

CURE. On the first appearance of a Windgall, bathe the place well with warm vinegar and spirits of wine, and put a pretty tight bandage round it. If this do not remove it, lay on blistering ointment till the cure shall be completed. But should this method also fail, which it seldom does, you must lay the Windgall open, and dress it as a common wound. Before you use the knife, be careful to get the horse's body into a proper cool state, by physic.

Some people fire, to cure Windgalls, running the iron on the skin, (what is called scoring,) but thereby do little good, as that cannot destroy the bag of wind and matter. It may draw the skin a little tighter, so that the Windgall will not appear so large.













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